

Inside Dope

By GEORGE
F. TAUBENECK



Learn to live and laugh —
thus delay your epitaph

Stories of the Week Purdue-Herrick Project Progresses

Air Conditioned Hearts
Do They Read Their Mail?
So What's Money?
Executives See Red
Value of a Newspaper
Write Your Congressman!

Stories of the Week

Studio bigwigs were in the throes of selecting a new name for a handsome young male actor. Several favored "John Roberts."

"No, no, I say," screamed Sam Goldwyn. "Every Tom, Dick, and Harry is named John."

On an application for a collegiate scholarship appears this blank: "State reasons for needing financial assistance."

Filled in a candid fellow:

"My wife has left me, so I am my sole means of support."

His wife kept telephoning him at work.

Not once but as many as 60 times a day, Irving Berzon, a real estate broker, complained to Superior Judge Elmer D. Doyle.

"I only wanted to find out how he was," Mrs. Berzon explained.

"Now tell the Court," prodded Mr. District Attorney, "just why you killed your husband with a bow-and-arrow."

Big-blue-eyed the defendant: "I didn't want to awaken the children."

Purdue-Herrick Project Progresses

Purdue university's newly-formed Center for Refrigeration and Climate Control reports further progress in its drive to raise more than \$1,000,000 for completing the necessary buildings and instrumentation and carrying out the initial three-year research program.

The center was launched by a \$300,000 grant from Tecumseh Products Co. and The Herrick Foundation (Ray W. Herrick, donor). Recently, the center got another boost from the same source when Herrick announced an additional \$100,000 grant.

With funds from other sponsors, from the refrigeration industry, and from the university itself, the center now has an impressive \$678,000 bank balance, according to Ralph A. Morgen, research director. Total estimated cost of the center, including the first three years of

(Concluded on Page 8, Col. 1)

500 Firms May Show at Exposition

CHICAGO—Number of exhibitors scheduled for the 13th International Heating & Air Conditioning Exposition has already passed 485. It may well top 500 before the doors of the International Amphitheatre here swing open to the trade on Feb. 25, the exposition management has announced.

The exposition, sponsored by the American Society of Heating & Air-Conditioning Engineers and managed by the International Exposition Co., will run for five days.

It will open at 2 p.m., Monday, Feb. 25 and will close at 6 p.m. Friday March 1. Exhibits will be open from noon until 10 p.m. each day, except for the late start on Monday and the early closing on Friday.

Special bus service will run between leading Loop hotels and the Amphitheatre starting at 11 a.m. each day, E. K. Stevens, exposition manager, reports. One way fare will be 50 cents. Signs in hotel lobbies will tell at which entrance the bus will stop.

Advance registrations for
(Concluded on Page 29, Col. 1)

Lewyt To Resume Room Conditioner Output In May

LONG ISLAND CITY, N. Y.—Manufacture of its room air conditioner line will be resumed the first week in May, the Lewyt Air Conditioning Corp. announced.

Alex Lewyt, president, said the firm has been out of production since last Dec. 1, when it moved from its Brooklyn plant to a new factory here. The new plant didn't have the room for the air conditioner production line, he explained.

At that time Lewyt made known that his company would "like to stay in the air conditioner business," but would want the units produced on Lewyt tooling, but by another manufacturer. "But we couldn't

(Concluded on Page 25, Col. 3)

N.J. UA-RACCA Agreement Recognizes 'Refrigeration, Air Conditioning Div.'

NEWARK, N. J.—Recognition of a "refrigeration and air conditioning division" of the union is one of the major points in a statewide agreement signed here this month by the Refrigeration & Air Conditioning Contractors Association of New Jersey, Inc., and the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry (UA).

Establishment of the new

FTC Will Hear Defense In Dairy Cases

WASHINGTON, D. C.—Nine ice cream companies charged with unfair trade practices which include the "giveaway" of refrigeration equipment to their accounts will present their defense before Federal Trade Commission hearing examiners starting next month.

H. P. Hood & Sons, Inc. of Charleston, Mass. will lead off on March 18 with hearings here. Dates and places for hearing the defense of the other companies have not yet been announced.

The eight other ice cream companies charged with giving special inducements to retailers to handle their products to the serious disadvantage of their smaller competitors are:

Arden Farms, Los Angeles; Beatrice Foods, Chicago; The Borden Co., New York City; Carnation Milk Co., Los Angeles; Fairmount Foods Co., Omaha; Foremost Ice Cream Co., Jacksonville, Fla.; National Dairy Products, New York City; and Pet Milk Co., St. Louis.

The Refrigeration & Air Con-
(Concluded on Page 28, Col. 5)

ARI Releases Room Unit Ratings of 15 Producers

Servel Announces Oil-Fired Home Air Conditioner

EVANSVILLE, Ind.—Development of "the first successful oil-fired residential air conditioner," which provides both heating and cooling from a single unit, was revealed by A. J. DeFino, vice president and general manager of the "All-Year" Air Conditioning Div. of Servel, Inc.

Two other companies participated in the two years of research and field-testing that preceded the announcement of the oil-fired air conditioner.

They are Gilbert & Barker Mfg. Co., of West Springfield, Mass., which developed a special low-pressure air-atomizing burner for the conditioner, and Esso Research & Engineering Co., Linden, N. J., which conducted a series of extensive laboratory and field tests. Both
(Concluded on Page 25, Col. 1)

WASHINGTON, D. C.—Geo. S. Jones, Jr., managing director of the Air-Conditioning & Refrigeration Institute, has released a tabulation of the B.t.u./hr. ratings of 1957 room air conditioner lines being made by manufacturers participating in ARI's program for industry-wide adoption of B.t.u. ratings arrived at as a result of tests prescribed in ARI Standard 110-56.

The ratings of 15 manufacturers were made public by the ARI director. All of these except one have published their ratings in consumer literature, specification sheets, or other material.

The one exception, Philco Corp., Appliance Div., has filed with ARI its preliminary but unofficial ratings, as its test program was delayed by a strike. Jones said Philco's final figures are expected within a couple of weeks.

In addition to the 16, six other manufacturing companies have assured ARI within the past few
(Concluded on Page 12, Col. 1)

Air Curtain for Frozen Food Cases Only Experimental—Tyler

NILES, Mich.—Use of an air curtain technique for multiple-shelf frozen food cases indicates a "trend in experimental work being conducted" by various companies rather than a product "ready for distribution now," Robert L. Tyler, president of Tyler Refrigerator Corp. said.

Atomic Heating for Communities by '66?

EVANSTON, Ill.—A leading heating engineer believes central atomic heating plants for an entire community or a large housing development may not be too far away.

"Maybe we'll have them by 1966—maybe by 1970," said John W. James, president of the American Society of Heating & Air-Conditioning Engineers.

James, vice president of research for McDonnell & Miller, Inc., discussed nuclear heating
(Concluded on Page 25, Col. 4)

He had no comment on the progress his firm has made in its reported experiments with a vertical, shelf-type open frozen food case based on a principle similar to that used in air curtain doors.

This principle "seems to offer a good possibility" of meeting requests of merchandisers for shelving-type fixtures for frozen food display, he further explained.

"A great deal of experimental work must be done prior to introduction of such equipment," he continued, "due to the problem of air movement affected by heating and air conditioning inside the market, and to the extraordinary service these fixtures must perform during peak periods of business on Friday and Saturday in the modern supermarket."

York Appoints Rising Marketing Vice President

YORK, Pa.—Austin Rising, who was formerly associated with Whirlpool-Seeger Corp., Radio Corp. of America, and O. A. Sutton Corp., has joined York Div., Borg-Warner Corp., as vice president in charge of marketing, according to Henry M. Haase, York president.

Rising's appointment is in line with a proposed broadening of York's scope in the manufacturing field, Haase pointed out. He said this program will include a number of new products.

Andrew C. Friemann and Marshall G. Munce, vice presidents, have been in charge of marketing since York was merged with Borg-Warner last July. Haase explained that al-
(Concluded on Back Page, Col. 1)

BEHIND PAGE ONE . . .

Frozen Food Handling

Carelessness Scored as Damaging
To Entire Industry; Growth Cited..... 4

175 Tons of Package Units

Capper Publications Installation
Saves Space, Reduces Costs..... 6

Future of Home Air Conditioning

Nearly 10 Million Homes May Be
Air Conditioned In Next 10 Years..... 13

Hermetic Compressor Design (3)

..... 26

RACCA Labor Survey

Study Indicates That 29 Mechanics Are
Needed for Each \$ Million Worth of Business.... 28

Haskelite Holders OK Merger with Evans

GRAND RAPIDS, Mich.—one share of Evans stock for each three of Haskelite. The firm makes laminated plywood specialties at Grand Rapids and Marquette, Mich. and Mobile, Ala. Evans manufactures truck and bus heaters, Haskelite holders will receive and several other products.

Texas Bill Would Provide Retailers Offer One-Year Guaranty on Conditioners, Refrigerators, Appliances

AUSTIN, Texas—Retailers of new automobiles, air conditioners, refrigerators, television receivers, and other household appliances or machinery powered by electricity or petroleum products would have to guarantee their products against defective parts or faulty workmanship for one year under terms of a bill introduced in the Texas Legislature by Rep. Carlton Moore of Houston.

The bill would require that

defective parts be replaced without cost up to one year and that manufacturers replace the parts for the vendors.

Michigan RSES To Meet

SAGINAW, Mich.—Annual convention of the Michigan State Association of the Refrigeration Service Engineers Society will be held at the Hotel Bancroft here from April 26 through 28, the association announced recently.

USDA Recommends

Check Food Shipment Temperature Before Loading, After Arrival

WASHINGTON, D. S.—Temperature of food products "must be checked before loading and upon arrival at destination" to make sure items remain at desired temperatures in transit, an Agriculture Dept. report stated.

Methods for checking temperatures of fresh fruits, vegetables, poultry, meats, and frozen foods are described.

Temperatures are checked through use of sample packages representative of the entire load, selected from certain locations in a refrigerator car or truck, it was noted.

The report is "Suggested Methods For Checking Temperatures of Fresh and Frozen Food Shipments."

'Housepower' Talks To Highlight Feb. 21-2 Adequate Wiring Meeting In Chicago

NEW YORK CITY—Final program for the 13th annual National Adequate Wiring Conference to be held at the Sherman hotel in Chicago, Feb. 21-22, has been set, according to the National Adequate Wiring Bureau here, sponsor of the meeting.

"Housepower" discussions will highlight the conference sessions to be held in "The Bal Tabarin" on the sixth floor.

At the opening session Thursday morning, Feb. 21, three speakers will tell "The Arizona Story"—how a "winning combination" is getting houses re-wired with full Housepower in the Phoenix area. Another speaker will present a roundup of the national advertising and promotional programs designed

to generate action in the field of residential wiring and re-wiring selling.

Among features of the afternoon session will be a Housepower forum in miniature, a discussion of trends in electrical applications and their possible effect on residential wiring standards, and presentation of Look awards for outstanding performance in residential wiring sales and promotional activity.

Programmed for Friday morning, in addition to other features, is a panel discussion on adequate wiring promotion for commercial and institutional buildings and also a series of short presentations of wiring sales or promotional activities which have proved effective.

Tulsa Plans Public Market, Food Center

TULSA, Okla.—The city of Tulsa plans to build and operate a \$10 million public market and food distribution center on a 147-acre tract.

Tentative plans aim at construction of cold storage warehouses, public warehouses, food warehouses, several marts for display and selling, and related service facilities.

The center would be operated under a trust arrangement already approved by the Tulsa City Commission and would be financed by self-liquidating revenue bonds.

Frigidaire School To Cover Refrigeration Fundamentals

DETROIT—All phases of refrigeration fundamentals for servicemen who care for household, commercial, air conditioning, and low temperature equipment will be covered in Frigidaire Sales Corp.'s service school here, Feb. 23 through March 1.

To be held in the Frigidaire Training Center, at the General Motors Training Center, 7707 W. Chicago, classes each day will begin at 8:30 a.m. and run through to 4:30 p.m., R. A. Wilkins, service manager, said.

H. N. Thomas Dies at 51

SANFORD, N. C.—Hurly N. Thomas, proprietor of Central TV & Appliance Co., died recently at the age of 51.



HINGED PAN

quick and easy access

Praised for years by installation and service men.

Built-in Heat Exchanger

NO RUSTING — polished aluminum casing

WRITE NOW
FOR
BULLETIN C-192-7

SMALL CURVETTE
800 to 5,600 BTU's Per Hour

COOLMASTER
2,500 to 60,000 BTU's Per Hour

RADIAL
2,500 to 23,000 BTU's Per Hour

KAY-TEE
2,500 to 12,000 BTU's Per Hour

KRAMER TRENTON CO. • Trenton 5, N.J.

NOLIN Moisturizer
VEGETABLE CASE

AVAILABLE IN
5' - 8' - 10' SIZES

If It's Not a NOLIN, It's Not a MOISTURIZER

NOLIN MANUFACTURING COMPANY
1400 LLOYD ST. PH. 3-4454
MONTGOMERY, ALABAMA



Bill Aulsebrook, Manager Quality Control, addressing a production personnel group.

HARDEST MAN TO PLEASE IN EVANSVILLE, INDIANA!

Most quality-control managers are bugs on their subject . . . but our man (Bill Aulsebrook, by name) is a real bear. As part of a continuing educational program, Bill regularly schools all employees on his favorite subject. His latest talk is the best one on quality control we've ever heard. Following are excerpts:

"Building refrigeration compressors is a tough business. It calls for more know-how, more accuracy, more endurance, more skill than most outfits have.

"Compare our product with an automobile engine. You're pretty well satisfied if you drive your auto 50,000 miles before the engine really needs a major overhaul. At forty miles an hour that's 1,250 hours of operation.

"When one of our refrigeration compressors is installed, it runs twelve to sixteen hours a day, every day, every week, every month in the year. It gets 1,250 hours of operation in about three months! Yet, it is expected to last *ten years*, and that's over 50,000 hours—the equivalent of running your car 2,000,000 miles!

"Now, there's another angle that makes this a tough business—that's the necessity angle. If your car battery quits, you can call a cab. If your lawn mower engine won't start, you borrow one from your neighbor. But, if you're running a supermarket and your freezer quits some Saturday night, you've lost several hundred dollars in melted food by Monday morning.

"That's why we must be so precise in producing our compressors. That's why we must hold such close tolerances. That's why it takes continuous checking with the best precision gauges. And, above all, that's why it takes people who are earnestly interested in doing a good job!"

Yes, Bill Aulsebrook is a mighty hard man to please, but we like him that way. It helps us assure you of built-in dependability with every Bendix-Westinghouse compressor. We want your business—a chance to tell our entire story and to submit quotations. Write us, or better still, see us at the Heating and Air Conditioning Show, Chicago, February twenty-fifth to March first. EVANSVILLE DIVISION, EVANSVILLE 11, INDIANA.

EVANSVILLE DIVISION of
Bendix-Westinghouse
Automotive Air Brake Company

For more information about products advertised on this page use Information Center, page 22.

Frozen Food Handling

Poorly Preserved, Unsafe Products Scored as Damaging To Entire Industry; Grocers Plan To Add Display Space, Survey Shows; Distributors Advised To Provide More Storage Space for Retailers

MIAMI BEACH, Fla.—Importance of proper handling of frozen foods and development of increased back room storage space for independent retail stores were emphasized in talks presented at the national frozen food convention held here.

Another feature of the meeting was presentation of highlights of a study on what is happening in retail frozen food cases across the country.

Richard M. Page, retiring president of the National Frozen Food Distributors Association, told the conferees:

"I can't emphasize too much the proper handling of frozen

food. One national brand was practically dead in a certain market after food poisoning developed [because of improper handling].

"I also would like to bring out a very interesting story about the proper delivery of frozen food. Some packers want distributors to have good trucks, then they sell anybody else and care not how the food reaches the housewife through the other channels.

"There is a definite and important delivery cost in any distributor's business who handles merchandise at the proper temperatures. You have to have

refrigerated trucks that cost you an investment or an obligation if leased. Some sell cheaper because they cheat on this. They hurt the industry at the distributor level—just as at the processing level some chicken pot pies become gravy pies on the altar of cut prices.

Sample Showed High Bacterial Count

"Speaking of good chicken pot pies, I read a most remarkable thing in the October issue of Consumer Reports, distributed by Consumers Union to over 750,000 members. Its discussion of frozen pies lists the product of one of the nation's leading packers as 'Not acceptable—of 6 samples, four had excessively high bacterial counts.' Isn't that fine publicity for our business as well as for that brand?"

"As you probably know these six pot pies were not secured from the packer, but from some retail stores, just as your wife or mine might do. I have full confidence in the processing standards of the packer named and believe he packs about as good a product as anyone.

"But what happens after that? I saw it with my own eyes. I walked down a warehouse platform in 90° heat. There was the identical brand in question sitting outside, waiting to be loaded for 'Distribution' (or 'spoilage') into a panel truck—with no refrigeration, no insulation, and just as hot as the rest of the town.

"If each pie is finally dumped down low enough in the retailer's cabinet at destination, it may be refrozen so the customer will believe she's buying a product with 'quality frozen in.' This can and does happen to every brand, too, when price-cutting offers get the call over quality distribution at either wholesale or retail level, or both."

Distributor Must Protect Merchandise

This subject was also touched on by Hubert M. Arons of Hartford Freezer Corp. In discussing the role of the distributor, Arons stressed:

"The distributor must protect the merchandise at all times. Protect it against deterioration and against abusive handling. That means, deliver no semi-thawed products and no dented, torn, bruised, or dirty packages."

Pointing out that researchers and market analysts "have shown us that the independent

RETAIL STOREWIDE COMPARISON BASED ON 47 DEPARTMENTS

Unit Sales	Dollar Sales	% Store Sales	Dollars Gross Profit
1. Produce	1. Meats	28.12%	1. Meats
2. Meats	2. Produce	12.76%	2. Produce
3. Dairy	3. Dairy	8.61%	3. Dairy
4. Beverages	4. Beverages	7.76%	4. Frozen Foods
5. Frozen Foods	5. Frozen Foods	4.14%	5. Beverages
6. Paper Products	6. Cigarettes	2.73%	6. Household Supplies

13-week Sales Comparison—\$10,000 Weekly Sales Average.

retailers are not doing their share of the frozen food business," Arons also said that distributors "can do something to help them out by increasing back room storage space.

"If a distributor could get possession of used ice cream cases or antiquated display cases and put them in the stores he services, both the distributor and the retailer will benefit.

"How? First, the retailers will be assured constant inventory to meet the fluctuating demands of the public . . . during normal selling periods and at sale times . . . for the distributor, the added case means added sales.

Extra Case Can Lick Weekend Shortages

"An extra case can lick the stock shortage problem that occurs over weekends or over holidays. For the distributor, the added case means added sales. "It all rests on this proposi-

tion that the display case is no longer the efficient storage space. I strongly feel that it is the distributor's responsibility to make available this added space to his retail accounts . . . it means more business for all involved at lower cost."

In presenting highlights of a study made by *Progressive Grocer* on what is happening in retail frozen food cases all over the country, Joseph Trout, of the publication, stated:

"Virtually every single dealer who participated in our survey felt that frozen foods had by no means reached their peak of development. To back up this belief in the continued expansion of frozen foods, almost half of the dealers surveyed announced plans for the enlargement of their frozen food departments in the immediate future."

Among other things, Trout told the conferees:

"Meats, as you probably (Concluded on next page)

FREEZ-KING
...the leader

new!
portion-control
automatic
mix feed

2 COMPRESSORS

2 TIMES THE PROFITS

TWICE AS EASY TO OPERATE

FREEZ-KING
COUNTER MODEL
SHAKE MACHINE

now!
Model 850
For counter or
back-bar

Largest capacity of any
counter shake machine . . .
more than 200 shakes per
hour.

No. 800
Shake machine
Drive-in
capacity.

No. 875 Counter model
soft-serve. Companion to 850.

No. 925
Soft-serve.
Slim, trim
space saver.
Companion to 975.

Exclusive territories available to master distributors and dealers
Write: **FREEZ-KING CORPORATION**
2518 W. Milwaukee, Dept. 16 Chicago 18, Ill.

More display in the same floor space!

Every inch of display space added to a food store means more profit. Warren's handsomely styled new MASTER MERCHANDISERS with Merchandising Canopies add display space without increasing floor space by even one inch. Not only is there maximum-cube frozen-food display, with seven packs front to back, but there are full-volume grocery shelves, too. Both shelves of Warren's Merchandising Canopy are adjustable to three positions, with a third shelf formed by the case top itself. These canopies are used with Warren's Master Merchandisers for meat and produce as well as the MULTI-CASE for frozen foods illustrated here.

For more detailed information about all styles of Warren Master Merchandisers, write, wire, or call . . .

Warren Refrigerators

P.O. BOX 1436, ATLANTA 1, GA.
EXPORT DIV.: 354 S. SPRING ST.
LOS ANGELES, CAL.

We're SPECIALISTS in

REFRIGERATION

AIR CONDITIONING

ELECTRIC MOTORS

PARTS and Supplies

WE SAVE YOU MONEY because we're specialists, with the largest selection in the world—over 10,000 items—at lowest prices. They're all illustrated, priced and described in our newest **HARRY ALTER DEPENDABOOK**—"the standard of the trade."

Write on your letterhead for the **DEPENDABOOK**

WHOLESALE ONLY The **HARRY ALTER CO., Inc.**, 1717 S. Wabash Ave., Dept. A, Chicago 16, Ill.

Frozen Foods--

(Concluded from preceding page)

know, account for approximately 24 to 26% of total store sales; there has been no significant change in this ratio between 1954 and 1956, but meat sales have increased dollarwise along with store-wide sales, and they, too, are some 14% higher than they were two years ago.

"Yet, small stores have increased their linear footage of meat display by less than 1%—their frozen food display has increased by 36%. Superettes have increased linear meat display by 7%—and frozen foods by 34%; supermarkets have increased meat display by 20%—and frozen foods by 63%. All stores average meat displays 18% greater in linear footage than two years ago, while frozen food displays are 52% longer."

Superettes Do Good Job

Another point made by Trout was that superettes, particularly in the larger cities, "offer a great deal of shopping convenience to their customers, and usually they do a good job on frozen foods."

"Just for one example, we know of a small neighborhood store in Philadelphia that recently remodeled. Remodeling brought his volume up, store-wide, from \$4,000 to \$5,000 a week—in the same space."

"Part of the remodeling involved expansion of his frozen food space from 8 ft. to 22 ft. His frozen food volume increased 150%—he's now doing about \$600 a week in frozen foods—something like \$27 per linear foot. The supermarkets in our retail study averaged \$20 a foot."

During the midwestern regional meeting at the convention, Lloyd Johnson of Super Value Stores, Minneapolis, declared that frozen food distributors "have now streamlined and adjusted their operations."

"Progressive and farsighted distributors are concerned by trends such as this one revealed in a recent survey by *Progressive Grocer* magazine, namely, 'Wholesale grocers now supply 40.7% of retailers' frozen foods purchases compared with 35.7% in 1954.'"

Don Davis of IGA, presented a chart, "The Magic Four" (see chart), based on a 13-week sales comparison with a \$10,000 weekly sales average.

This showed that in unit sales of produce, meats, dairy, beverages, frozen foods, and paper products, frozen foods were in 5th place. In dollar sales, frozen foods also were in 5th place, with 4.14% of the volume of all sales; however, in dollars gross profit, frozen foods were in 4th place.

Civil Defense Effort

Convention delegates were told that the frozen foods industry is cooperating with the Federal Government in a program to protect America's food supply in event of enemy attack. F. Gilbert Lamb, retiring president of the National Association of Frozen Food Packers, said that a series of civil defense schools will open to train food plant personnel in measures for protecting food and insuring continued production.

Outside Walk-Ins Conserve Space; Rooftop Air Conditioner Saves More

SAN ANTONIO—New Piggly Wiggly market in suburban Castle Hills features walk-in meat and produce coolers built outside the original building to conserve space.

A 12 by 14-ft. meat cooler was erected outside the market just behind the meat cutting room. Door to the unit was cut and faced in conformity with the cutting room. Resting on 2 in. of concrete atop 4 in. of cork insulation, the cooler's floor level is even with the rest of the store.

In addition, for space conservation, the 8 by 12-ft. produce cooler stands behind the produce preparation room outside the building. Thus, both coolers are said to appear as part of the selling area.

Space-saving triple-deck dairy cases, 24 ft. long, with air cur-

tain were also installed. Through use of fans, cold air is forced from the back of the two top decks and pulled in on the outside edge of the bottom shelf.

Refrigerated produce cases 30 ft. long do double duty with storage beneath the display. There are 41 ft. of display cases for frozen foods and 16 ft. for frozen meats.

Gondolas have 6-in. high bases to provide better accessibility to top shelf.

Interference of large posts inside the store was minimized by building shelves made to fit the merchandise around the columns.

Another space saving measure was locating the 15-ton Mathes air conditioning unit on the roof. Ductwork is also there due to low beams in the store. Conditioned air is diffused through nine ceiling outlets.

Sees Automatic Vending Sales at \$10 Billion Per Year In 10 Years

PHILADELPHIA — Sales of merchandise by the automatic vending industry will grow in the next 10 years from the current \$2 billion a year to \$10 billion, E. F. Hinkle, president of Automatic Canteen Co. of America, predicted recently.

"New products in new vending machines in new locations" is the reason.

Total sales of about \$2 billion in 1956 were reported. This

was 1% of all U.S. retail sales. He said Automatic Canteen has developed new coffee, food, gum, and cigarette machines and outdoor vending machines for use outside supermarkets.

Revenue from older products—candy, gum, nuts, and cold beverage machines—is larger in dollar volume today, Hinkle stated. But their percentage of the total "will decrease because of addition of new products."

24-Hour Food Service Has 124 Feet of Refrigerated Display Fixtures

CHICAGO — Offering round-the-clock service and free delivery day or night, 24 Hour Food Service was opened here recently.

Federal refrigerated cases include 40 ft. of frozen foods, 24

ft. of meat, 30 ft. of dairy, and 30 ft. of produce. The market deliberately calls attention to its non-pre-packaged meats. Only weiners, sausage, bacon, and some frozen items are available in packages.



READING

"LEKTROSEAL"

COPPER REFRIGERATION TUBE

FIRST STEP
in a Quality
Installation—

Soft temper for easier forming . . .
dehydrated — with crimped ends
to seal out all moisture and dirt . . .
and keep the inside surface absolutely clean. Comes in handy 50-foot coil packed in its own convenient protective carton, clearly labeled for easy identification. To be sure of the job — be sure to specify Reading.

READING TUBE CORPORATION
EMPIRE STATE BUILDING, NEW YORK 1, N. Y. WORKS: Reading, Pa.

Distribution	READING, PA.	DALLAS, TEXAS	OAKLAND, CALIF.	CLEVELAND, OHIO
Depots:	WOODSIDE, L.I., N.Y. 57-17 Northern Blvd.	9000 Sovereign Row Brook Hollow Industrial District	410 Hegenberger Road	4615 Perkins Ave.
	CHICAGO, ILL. 724 W. 50th St.	HOUSTON, TEXAS 1121 Rothwell St.	LOS ANGELES, CALIF. 120 No. Santa Fe Ave.	ATLANTA, GA. 690 Murphy Ave. S.W., Unit 5, Bldg. B

Sold Through Wholesalers Only

For more information about products advertised on this page use Information Center, page 22.

18 Package Units Completely Air Condition Copper Publications Plant

175-Tons of Self-Contained Equipment
Saves Space, Cuts First Cost Estimate

By C. Dale Mericle

TOPEKA, Kan.—With the addition of 18 package units totaling 175 tons, offices and “shop” of the widely known Copper Publications company here are now completely air conditioned—entirely with self-contained equipment.

Considerable ingenuity went into this installation, which was accomplished without wasting any space, according to E. F. “Cass” Cassing, field engineer for General Heating and Cooling Co., General Electric distributor who supervised the job. Installing contractor was Taylor Refrigeration of Topeka. Original cost estimate made for air conditioning the building with a central station system “was cut in half by the use of packages,” Cassing declares, adding that “we have found this pretty close to average.”

Presses Take Up Central Unit Site

He points out, however, that “the main reason the central plant was not used seemed to be that the spot originally intended for the location of this was used by press equipment. The packages probably took up more space than the room necessary for the central plant, but it took only 8 sq. ft. per unit here, there, and yonder, and at places where it could be worked in.”

In one location the packages took up no floor space at all. Two 7½-hp. ceiling-mounted conditioners were provided for the composing room to permit “spot cooling” of the linotype operators. Cool air blows down the aisles to give comfort to each operator, offsetting the heat produced by the molten metal pot and motor on the back of each linotype.

The 18 G-E package conditioners ranged in size from 5 to 15 hp. Another 25 tons of package units which had been installed some years ago to cool the city news room and press room were relocated to fit in with the over-all air conditioning plan.

Of the new conditioners there are six units in the magazine planning and art department, two in the addressograph department, one in the mailing room, two in the composing room, one in the electrotype department, two each in the engraving and reliefograph departments, and two serving the general and executive offices.

Only ductwork involved was that run to the executive offices.

Install 50-Ton Cooling Towers

Other equipment installed at this time included five 50-ton Marley cooling towers. Five separate Jacuzzi pumps handle water circulation between the towers and the units. The pumps are installed at the tower to give quick priming action, Cassing points out.

He notes also that the piping and control hookups for the towers were designed for zone

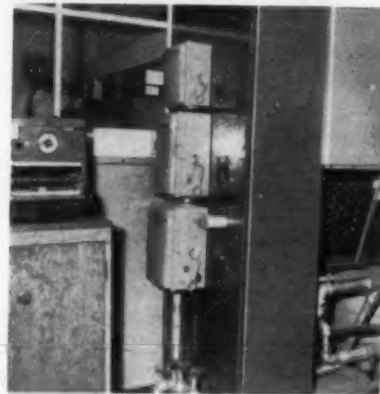
control operation of the air conditioners. While the office areas are occupied only during the normal working day of 8 a.m. to 5 p.m., the printing operations go on around the clock.

Space-saving aspects of this installation, according to Cassing, include the mounting of electrical connection boxes directly on the conditioners themselves. Besides saving space, this also cut costs and simplified installation.

And in the addressograph department, for example, advantage was taken of the fact that the open racks holding the metal address plates not only

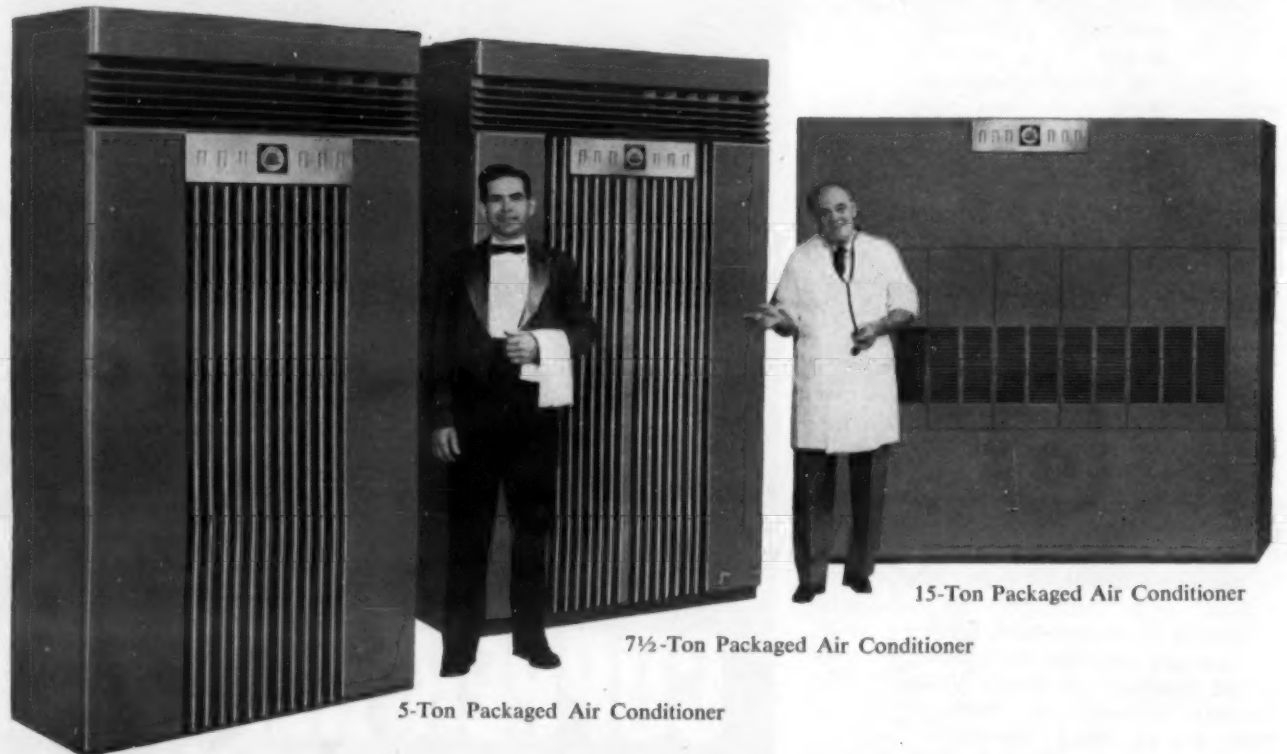
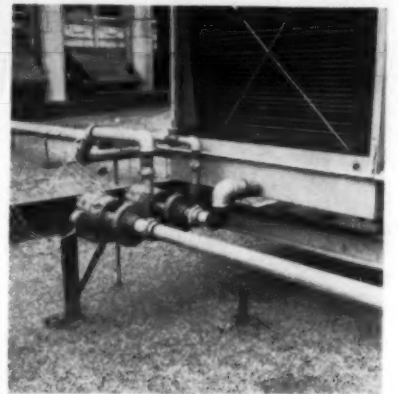
(Concluded on next page)

BELOW: Return air enters through a movable section of metal address labels. These carts are moved periodically throughout the month. There is no lost space to the servicing area and to service the unit, carts may be moved.



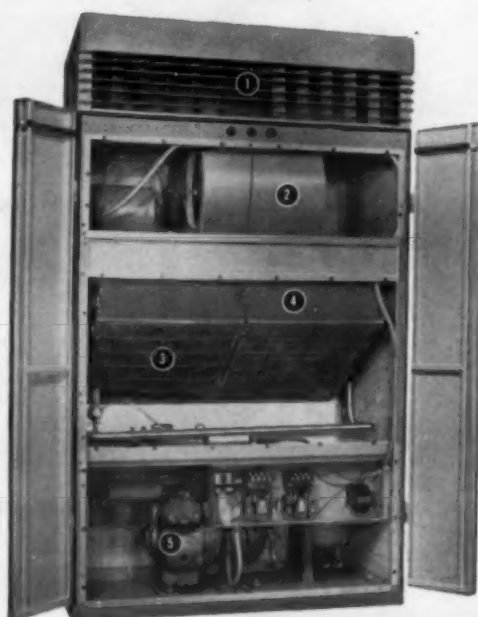
ABOVE: Electrical connection boxes were placed on the package units for ease of installation, low cost, and due to lack of other available space.

BELOW: These 5-hp. pumps were installed at cooling towers to give quick priming action. A close-up of “J” beam support may be seen.



All-new American Blower Packaged

OUTSTANDING PERFORMANCE! QUIET OPERATION! LOW OPERATING COST!



1. **Plenum.** Minimum height to fit into limited spaces. Outlet grille has horizontal and vertical louvers to control air distribution. No special tools needed for adjustment. Designed for optimum velocity at low fan speeds.

2. **Fan.** Centerplate construction eliminates turbulence; wheel and housing integrally designed; large outlet area, low-speed operation. Fan size specially selected for each size unit, for peak performance with plenum or duct work.

3. **Filter.** Permanent-type. Large face area gives maximum cleaning; permits low fan speeds. Low air resistance means more air per horsepower, smaller electric bills. Condensate washes dust, dirt from filter, provides less variation in air flow.

4. **Cooling Coils.** Copper coils with spiral aluminum fins, sloped and staggered to give greatest air-coil contact. Because air is drawn through coils, not blown through, every square foot of coil is utilized for more cooling capacity.

5. **Compressor.** Motor and compressor hermetically sealed in rigid casing; spring-mounted to absorb vibration. Require no oiling, adjusting, seasonal pumpdown. Triple-valve design for quietness. Warranted for five years.

Package Units Cool Plant--

(Concluded from preceding page) have been reduced over 50% of offer little resistance to air flow but are frequently moved. Thus, the racks can be placed directly in front of, or beside, the units without interfering with the return air intakes. The movable racks are low enough to avoid obstructing discharge of air from the units.

The installers also made the most of the existing building design to simplify the work of installing and reduce costs, Cassing indicates.

Plumbing Costs Cut 50%

"The several buildings occupied by Capper are located around a window well, which proved a good location for pipes, conduit, drain lines, and fresh air grilles," he says. "Because of the huge window well, the plumbing costs are estimated to

have been reduced over 50% of a normal installation using this amount of tonnage."

And foundations for the 50-ton cooling towers mounted on the roof of the window well section were devised of special I-beams resting on parapet walls of the building. To minimize noise transmission, water pipes to the towers were elevated on bracket rods well above the roof.

Although primarily a comfort cooling system with the accent obviously on improved employee efficiency, at least one positive improvement in processes has been noted. Production has been speeded up in the art department because the ink dries much more rapidly due to air circulation, Cassing says, even in the winter when the conditioner fans are used to circulate filtered air.

Recold Now Official Name of Refrigeration Engineering

LOS ANGELES—Recold Corp. became the new name of Refrigeration Engineering, Inc. on Feb. 15, announces H. T. (Hy) Jarvis, president.

Company officials felt the name change was inevitable since the firm has been known unofficially as Recold since 1932 and has marketed its products under the Recold trademark since that time.

"Since changing the corporate title is such an important event in the company's history, 1957, Recold's Silver Anniversary, was chosen as being a particularly appropriate time," it was noted.

Established in 1932, Recold has grown from a "one-man, one-bench" plant which manufactured only gravity fin coils to a factory which today occupies 110,000 sq. ft. and produces

"one of the broadest lines of refrigeration and air conditioning equipment in the industry."

"This name change will mark the beginning of the company's twenty-fifth year. Other events, of industry-wide interest, are being planned throughout 1957 to make Recold's Silver Anniversary a memorable year."

Sees Cooling Future 'Excellent' In Asia

LA CROSSE, Wis.—Despite a lack of American dollars, air conditioning is making good progress in India, Balbir S. Dua, Trane Co. distributor in India, revealed during his visit to Trane's home offices.

Marking his first visit here in four years, Dua stated he believed "the future of air conditioning is excellent in many Asiatic countries." Dua heads American Refrigerator Co. with offices in Calcutta, Bombay, and New Delhi.

RACCA Agreement--

(Concluded from Page 1)

tatives of the state committee of the UA representing 25 local unions in New Jersey.

Also sitting in on the final committee meetings to provide guidance were Joseph F. Monahan, general organizer for the UA, and Ray Kromer, executive vice president of Refrigeration & Air Conditioning Contractors Association (national).

The RACCA national was particularly interested, since it has advocated the formation of a separate division in the union, and also believes there can be advantages in statewide agreements.

Some of the special significance of the New Jersey agreement to the individual employee and his employer, beyond the standard contract provisions on hours, wages, working conditions, uniforms, etc., are:

EACH MECHANIC GIVEN 'FREEDOM OF MOVEMENT'

The individual mechanic is given "freedom of movement" in that he can move into any local union in the state.

The individual mechanic gets a "building trades book"—stamped refrigeration and air conditioning division—which means that he can perform installation work on any job in which the building trades unions are being employed. In some past instances, local contracts with the UA have limited certain mechanics' operations to service work.

JOINT TRAINING

Another phase of the agreement is the establishment of a joint mechanics' training and industry cooperation effort, with a joint statewide committee consisting of representatives of the local unions and various RACCA groups in New Jersey.

The training program, which would be jointly furnished, would include instruction for both apprentices and journeymen.

The plan also contemplates the hiring of an executive director or manager for this joint effort, who in addition to overseeing the training program, would maintain an office to direct such other cooperative activities as might be formulated for the benefit of the industry, and to serve as a clearing house for complaints.

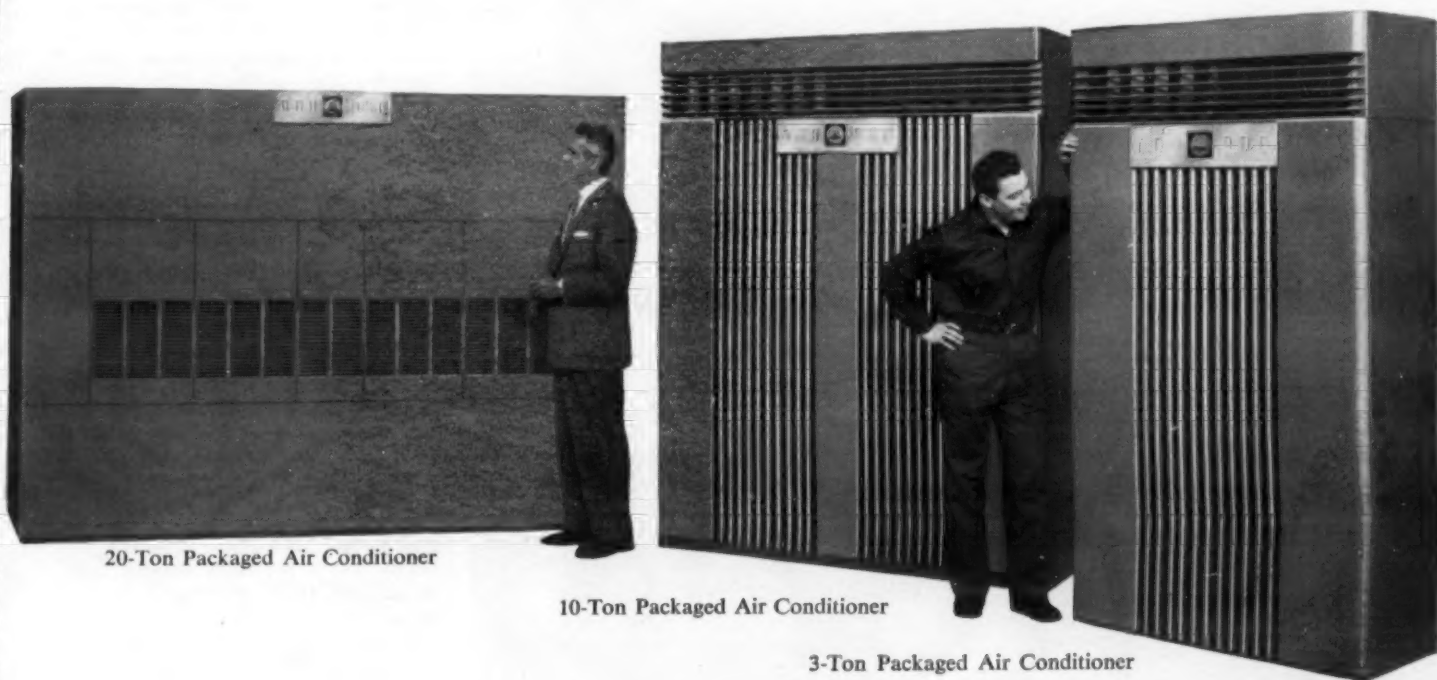
Official Denies Tailoring Cooling Specifications

JERSEY CITY, N. J.—An alderman's claim that air conditioning specifications for the new municipal building were tailored for one manufacturer was denied officially in a letter to common council here.

Questions asked by Ald. Peter Hoffman were answered by Earl W. May, the city's consultant on air conditioning.

Hoffman "had heard reports" that the air conditioning contract for the 10-story building would be filled by only one manufacturer. But May said the charges were "entirely without proof of basis in fact."

"In no case," he said, was equipment incorporated into the design that was not "standard," cataloged, and "completely accepted in the cooling industry."



20-Ton Packaged Air Conditioner

10-Ton Packaged Air Conditioner

3-Ton Packaged Air Conditioner

Air Conditioners for every business!

Comfort-engineered to condition every corner!

American Blower Comfort-Engineered Packaged Air Conditioners give you more cooling with their large-capacity cooling coils—sloped, spiraled and staggered for the greatest air-coil contact possible!

Air passes first through the large, heavy-duty filter where dirt, dust and impurities are removed. Then heat and moisture are extracted as the air is drawn over every square foot of the coil.

Finally, the American Blower Fan, with exclusive centerplate construction, sends conditioned air through plenum or duct work to every corner of a building.

Centerplate construction eliminates turbulence—means even circulation, greater efficiency, smoother, quieter operation.

There's an American Blower Comfort-Engineered Packaged Air Conditioner, in sizes from 3 to 20 tons, to satisfy the air-conditioning requirements of every business—retail stores, showrooms, offices, factories.

If you'd like to become a dealer for American Blower Packaged Air Conditioners—and benefit from American Blower's 75 years' leadership in the air-handling and air-conditioning fields—send for full information today! Write: American Blower Division of American-Standard, Detroit 32, Michigan.

DISTRIBUTORS: Choice territories are still available. Send for franchise data today.

Full Five-Year Warranty



In every American Blower Packaged Air Conditioner, the complete refrigeration circuit, including the hermetically sealed compressor, is warranted for a full five years. In addition, the compressor is permanently lubricated—never needs oiling or seasonal pumpdowns.

AMERICAN BLOWER

Division of AMERICAN-STANDARD



See our exhibit, Booths 22 & 26, at the Heating & Air Conditioning Exposition, International Amphitheatre, Chicago, Ill. Feb. 25-Mar. 1.

For more information about products advertised on this page use Information Center, page 22.

Inside Dope

By GEORGE
F. TAUBENECK

(Concluded from Page 1, Col. 1)
research operation, is \$1,153,400.

"Farsighted industrial leaders interested in basic new knowledge of how to control inside climate and the effects of such heating and cooling on humans and livestock may join the growing list of sponsors at any time," Morgen points out. "Donations may be made as lump sum grants, as periodic cash payments over a three-year period, or as gifts of needed equipment."

Morgen cordially invites questions on any phase of the project, which, he says, "is broad, interdisciplinary, and extremely promising in terms of the information it can discover and the high-level manpower it will train."

It deserves the united support

of our entire industry. We shall all gain from its discoveries.

Air Conditioned Hearts

Before a meeting of the American Heart Association a New Orleans doctor (reports the Virginia Electric and Power Co.) declared "a victim of heart disease might as well be asked to run around the hospital as to go through a hot, humid day in a room without air conditioning."

Do They Read Their Mail?

Names will be protected in this story, which is "going the rounds" in Detroit advertising and marketing circles.

Seems that a top executive here argued with some of his associates about the effectiveness of promotion by mail. It is his contention that most of it hits the wastebasket with only a cursory glance, if that.

To prove his point, he sent out 3,000 letters to dealers all over the country. It ran to eight paragraphs of "hard sell" copy on the superiority of his firm's product.

However, at the tag-end of his next-to-last paragraph he put this joker:

"Any dealer who phones me within 24 hours after receiving this letter will get my personal check for \$100."

Among all the 3,000 recipients only ONE phoned in to claim his hundred bucks. Sounds fantastic, but it's true.

So What's Money?

The Nizam of Hyderabad has retired. He had to; for the reorganization of India brings to a close the existence of the state of Hyderabad.

Although there may be a pull at the Nizam's heartstrings because he is forced to step from the ancestral throne, he will not

lack income to live sweetly. He will receive \$903,000 a year, presumably without income tax. Moreover, he possesses gold, silver and gems which are said to be worth \$100,000,000.

This sounds good to some of us. Indeed, there are many who would like to be in the boots of the Nizam, retired or not. However, the Nizam himself does not seem to depend upon his wealth as a source of happiness.

He has six palaces and lives in a bungalow. He has many stables and some well-trained elephants which have magnificent trappings. Yet he rides in a 1927 car. His wardrobes are filled with silken garments encrusted with rubies, emeralds and diamonds; but the Nizam wears shabby, Western-style suits.

Might be a moral there, somewhere. After you've got it, apparently it doesn't mean anything to you.

Executives See Red

Mr. Office Manager: If ultra-long powder room gab sessions worry you, paint the room red!

Red is a stimulating color which induces restlessness, according to du Pont researchers. And in a small room it can give occupants a feeling of claustrophobia. They'll have an urge to get out and (the manager can hope) back to work.

To inhibit in-plant romancing, paint cubbyholes dark blue or dark green.

However, if you're playing cupid, swish magenta colors over the walls.

Careful examination of your executives' personalities will clue you on what colors to paint their offices.

If one tends to be excitable, cool colors like light green or blue are what he needs.

If he is moody at times, he needs warmer hues, such as orange-yellow, brown, or ivory.

Unfortunately, no clues are offered for the color scheme of the boss who sees red when a raise is requested, thereby leaving you feeling blue.

That one you'll have to work out yourself.

Value of a Newspaper

People need a newspaper as a "friend and counselor" to help them face the fast changing, rather overwhelming world, declares Louis B. Seltzer, editor of the *Cleveland Press*.

"People are overwhelmed with the bigness of the country and the multiplicity of the problems," Editor Seltzer says. "Paradoxically they feel kind of lost in all this plenty and comfort. They want a friend and counselor that will be close to them."

Seltzer urged newspapers to "break down the barriers" that separate some of them from their readers by performing special services. The day of the cold, impersonal newspaper is passing, the Midwest editor observes.

"Today the newspaper ought to step in and guide people through the labyrinth. They can do it. And nobody else."

As the only newspaper serving this industry, we'll try hard to meet this challenge.

Write Your Congressman!

Adoption of the recommendations of the Hoover Commission would mean a \$5½ billion annual cut in federal taxes according to a noted Washington economist.

Theron J. Rice, a co-ordinator for the commission, declares "taxes can be cut and cut plenty" if Americans would "trim the size and cost of this hydra-headed government which is threatening to become our master."

The Hoover Report "painted a documented, disturbing word picture of a sprawling, voracious bureaucracy; of monumental waste, excesses, extravagances; of red tape, confusion and frustrations; of loose management, irresponsibility and misuses of appropriations — conditions which have developed over the years as the concentration of power in Washington has increased."

Quality pure Quantity sure



WITH...
Charg-A-Can
PACKAGED
REFRIGERANTS

- Factory controlled purity
- Assured accurate charging
- No cylinders, no deposit

There's never a doubt when you use American Potash & Chemical Corporation's accurate, dependable, and economical Charg-A-Can packaged refrigerants.* Dependable *quality* and positive *quantity* are both assured because Charg-A-Cans are filled under carefully controlled factory conditions, with material expertly analyzed for purity and moisture content. Service efficiency is increased because Charg-A-Cans save time, eliminate waste, do away with costly charging racks and cut down on heavy storage and transportation requirements. Stock-up on Charg-A-Cans today and watch service profits soar!

*Charg-A-Can refrigerants are packaged as follows:

"Freon-12"† . . . 95/100 lb.
"Freon-22"† . . . 2 lb.
"Freon-114"† . . . 1 lb.
Sulfur Dioxide . . . 1 lb.
Methyl Chloride . . . 2 lb.

†TRADEMARK OF E. I. DU PONT DE NEMOURS & CO., INC.



For your convenience, Charg-A-Cans are available in six-pack containers for greater ease in handling, stocking, display.

Stocked by refrigeration wholesalers everywhere.



REFRIGERATION DEPARTMENT

American Potash & Chemical Corporation

3030 WEST 6TH STREET, LOS ANGELES 54, CALIFORNIA 90 PARK AVENUE, NEW YORK 10, NEW YORK

For more information about products advertised on this page use Information Center, page 22.

'Tele-Sell' May Be Viewed by 40,000 Salesmen

NEW YORK CITY—The small businessman, the merchant, and the door-to-door salesman will get a chance to learn how the country's "super" salesmen do it when "Tele-Sell" stages "the world's biggest sales meeting" before 40,000 salesmen.

By closed circuit television in 34 American and Canadian cities, two Tele-Sell "spectaculars" will be staged on Feb. 26 and March 5, which will dramatize the most modern and effective selling methods.

It will feature in-person demonstrations and talks by 12 nationally renowned sales executives, plus talks by Vice President Richard M. Nixon and Commerce Secretary Sinclair Weeks.

Tele-Sell is a cooperative educational venture being staged by the 34 local sales executives clubs and chambers of commerce. The New York City meeting will be in Manhattan Center with 3,000 viewers.

\$10 TUITION FEE

"Tuition" is \$10 per person for both programs. Tickets may be obtained from the local club or chamber of commerce.

The programs featuring actual demonstrations rather than speeches, will cover two themes: (1) how the salesman should handle himself, and (2) how the salesman should handle his customer.

Each program will run for two hours, and will enact live dramatizations with professional actors on "do's and don'ts."

Film techniques of selling as they apply to various industries also will be shown.

SPEAKERS, TOPICS

Supersalesmen on the opening program Feb. 26 include:

Judson Sayre, president of Norge Div. of Borg-Warner Corp., talking on "Know Your Prospect"; H. C. Nolen, president of McKesson & Robbins, Inc., "How To Use Your Time"; H. Bruce Palmer, president of the Mutual Benefit Life Insurance Co., "Guiding the Buyer To the Sale"; Alfred C. Fuller, board chairman of Fuller Brush Co., "Meeting Sales Resistance"; Byron J. Nichols, general manager of group marketing of Chrysler Corp., "Proving Your Point."

All talks will be amplified by dramatic skits in offices, stores, homes, and outdoor locations. Vice President Nixon, who opens the program, will pay a tribute to selling and establish the U. S. government's recognition of the importance of salesmen and distribution to our prosperity.

The second program, March 5, will feature top executives of six leading companies. They are:

John M. Fox, president of Minute Maid Corp., talking on "Persistence Pays Off"; R. S. Wilson, executive vice president of Goodyear Tire & Rubber Co., "The Professional Approach to Salesmanship"; John M. Wilson, sales vice president of National Cash Register Co., "Reaching the Buyer's Self-Interest"; Mrs. Brownie Wise, vice president of Tupperware Home Parties, Inc.,

"Right Attitudes In Selling."

Also Joseph Kolodny, manager-director of National Association of Tobacco Distributors, "Know Your Facts"; and Philip M. Talbott, senior vice president, secretary and director of Wood-

ward & Lothrop, Washington,

"Selling at Wholesale."

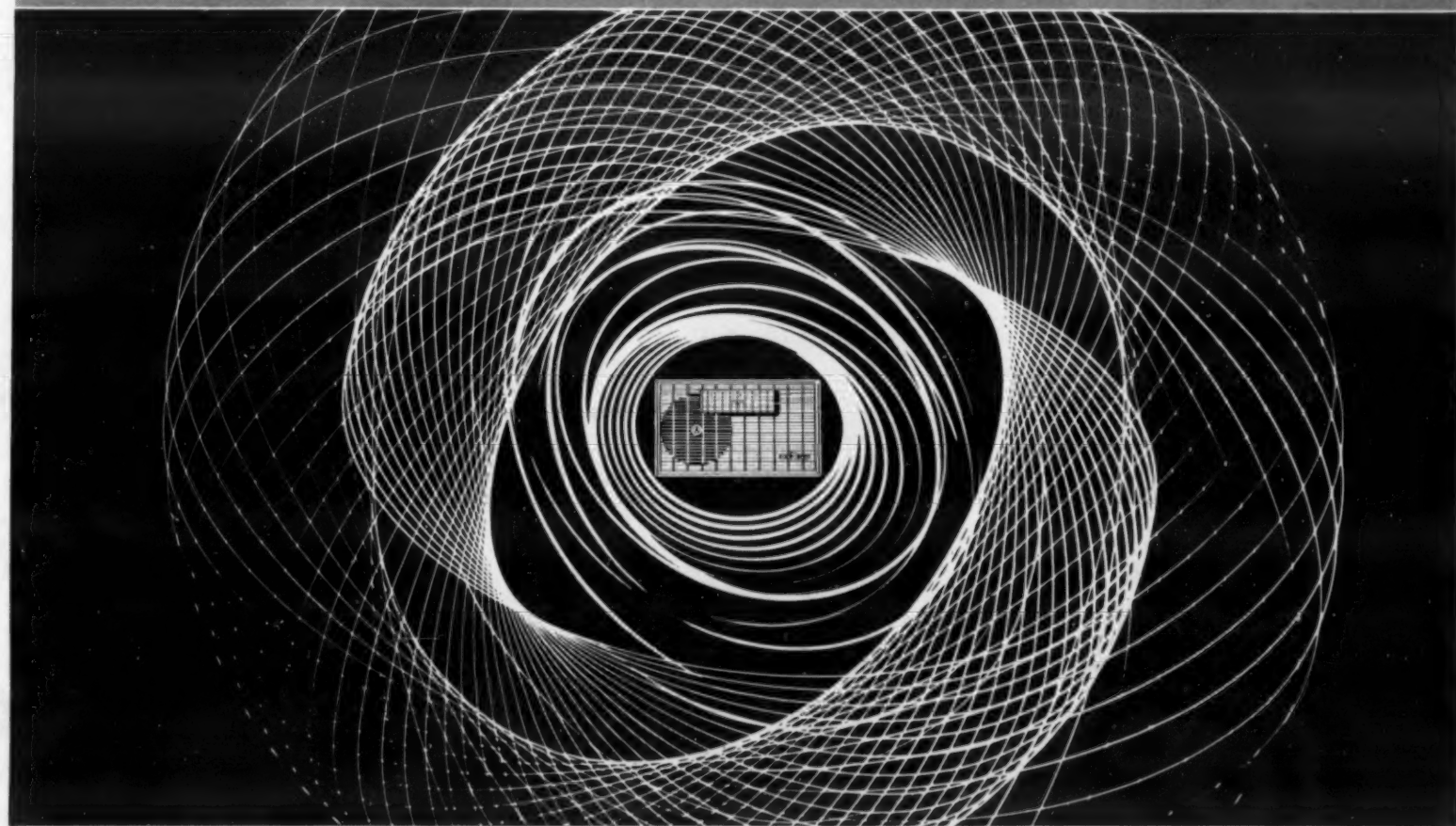
Commerce Secretary Weeks will open the program, referring to the new Office of Distribution in the U. S. Dept. of Commerce. The Tele-Sell cities that will

be linked by closed circuit TV:

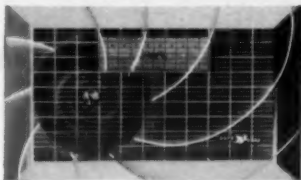
Baltimore, Boston, Buffalo, Charlotte, Chicago, Cincinnati, Cleveland, Columbus, Dallas, Dayton, Detroit, Erie, Ft. Lauderdale, Indianapolis, Jacksonville, Kansas City, Miami, Mil-

waukee, Minneapolis, Montreal, New York, Newark, Oklahoma City, Omaha, Philadelphia, Pittsburgh, Providence, Rochester, St. Louis, Syracuse, Toledo, Washington, Wichita, and Wilmington.

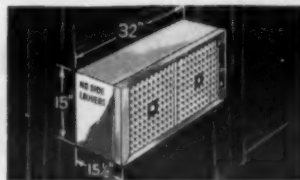
WITH ROTO CONE COOLING...



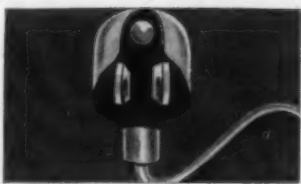
MITCHELL again obsoletes all other room air conditioners



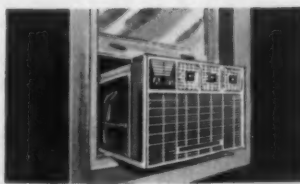
MITCHELL obsoletes all existing concepts of air conditioning...with Roto Cone. Now you can sell air conditioning's most brilliant advance in a decade...the air conditioner that cools 21% faster.



MITCHELL'S Pancake is lower, thinner, more versatile. Measures a mere 15" high, 15½" deep and 32" wide, with no side louvers. Advance design slide-out chassis provides unlimited application.



MITCHELL'S 12 new low amp air conditioners feature big cooling capacity and up to 40% savings on electricity. Available in "Sill", "Thin", "Thin and Low", and "Casement" styles.



MITCHELL features deluxe Ultra-Thin versatility. Takes 54% less space...fits flush inside or outside with the exclusive Mitchell interchangeable slide-out chassis in identical ¾ HP, 1 HP and 1½ HP cabinets.

MAKE BIG MONEY IN 1957—CALL YOUR MITCHELL DISTRIBUTOR



MITCHELL...The World's Finest...Most Complete Line of Room Air Conditioners. Call your Mitchell Distributor now! Make big money in 1957 with Mitchell—leading the imaginative independents of the Appliance Industry.

MITCHELL MANUFACTURING CO. A division of the CORY Corporation • 3200 W. Peterson Avenue, Chicago, Illinois

IN CANADA: 19 Waterman Avenue, Toronto

IN MEXICO: Mitchell-American, 78 Orinoco, Gral. Anaya Mex. D.F.

Copyright 1957, Mitchell Mfg. Co., Chicago, Ill.

For more information about products advertised on this page use Information Center, page 22.

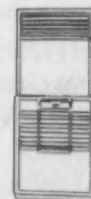
MITCHELL RESIDENTIAL AND COMMERCIAL PACKAGED UNITS

65 new products
65 new profit opportunities...



2, 4 HP "Compax" Air Cooled Self-Contained Packages

2, 3, 5 HP Remote Air Cooled Split Systems



2, 3, 5 HP Store Coolers and Residential Add-On Units Air or Water Cooled

Write today for your invitation to profits:
Robert H. Lodge, Sales Manager
Packaged Air Conditioner Division, Mitchell Manufacturing Co.
Chicago 45, Illinois

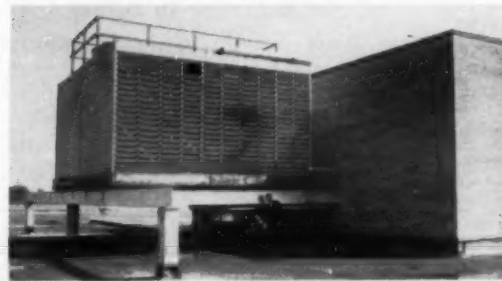
Chilled Water In 720-Ton Centrifugal System Serves 5 Fan, Coil Units To Air Condition 249,000-Sq. Ft. Store

LINCOLN PARK, Mich.—The largest retail store ever built by Sears Roebuck & Co. has been opened here in a 30-acre shopping center.

The entire store, covering 249,000 sq. ft. of space on two levels, is air conditioned with a 720-ton York centrifugal air conditioning system. Chilled water serves five fan and coil units of 10 to 40 hp. capacity, all located with the refrigeration unit in a penthouse on the store roof.



LARGEST Sears store in the world is cooled by this 720-ton York system mounted in the penthouse of the two-story building. Posing at the control panel is H. W. Hughes, manager of the Lincoln Park, Mich. store.



DWARFING Dean Allen of the Coon-DeVisser Co., who supplied the tower, is a 720-ton Marley twin-unit, cross flow cooling tower installed just outside the equipment penthouse.

Hooked to Twin-Unit 720-Ton Cooling Tower

The refrigeration system is hooked to a Marley twin-unit cross-flow cooling tower of 720-ton capacity mounted just outside the penthouse.

Adolf Flekke, construction superintendent for the store, commented that each of the fan units operated independently and each cooled a particular zone of the store.

Two units handle the ground floor, one unit handles the sales area on the second floor, one the warehouse space, and one the office spaces.

Cooled air is ducted to the various zones and is disseminated through Tuttle & Bailey ceiling diffusers. A single thermostat in each zone controls the operation of the fan unit.

Flekke said that air is returned through a plenum over the ceiling of each floor, rather than through return ducts as is done in other Sears stores.

Minimum of 25% Fresh Air Handled

The air handling system admits a minimum of 15% fresh air. It can be expanded to handle 100% fresh, when outdoor air is cool enough to keep interior air comfortable without being refrigerated.

The system, he said, is designed to maintain a 74° F. temperature. But at present it is holding even lower temperatures.

The York system circulates 1,440 gals of chilled water per minute and lowers the 57° F. water to 45° F. For condensing, 2,160 g.p.m. is circulated

through the cooling tower, which drops water temperature from 95 to 85° F.

Drake-Avery Co. of Detroit installed the refrigeration system, while Coon-DeVisser Co. supplied the cooling tower.

This store, described as the largest Sears store in the world, is the biggest of 15 stores in the center, which is located 11 miles southwest of downtown Detroit.

It features "related selling"

where the shopper finds related departments right next to each other. Stock rooms are on the second floor, either above or behind the departments they serve. They are supplied from the loading dock by a conveyor belt which can handle objects as heavy as a refrigerator, it was added.

Cooling Firm Moves

LITTLE ROCK, Ark.—General Air Conditioning Corp. has opened for business in its new home at Sixth and Collins Sts., it was reported.

Air Conditioned Operating Rooms Added To Hospital

PHILADELPHIA — Work recently began on construction of air conditioned and explosion proofed operating rooms at Rush hospital as a major expansion of the institution, it was announced.

All types of thoracic and general surgery will be performed in the new facilities of a hospital which for 66 years has heretofore confined itself to treatment of tuberculosis.

Remote condenser? Tricky sequence? Name your residential cooling control problem.

SOLVE IT AUTOMATICALLY WITH HONEYWELL "CUSTOM CONTROL" FOR AIR CONDITIONING!

- Any switch and thermostat combination you want
- Any sequence of operations to meet any heating-cooling need
- All in one simple, easy-to-stock, easy-to-install system
- All part of Honeywell's "Custom Control" Air Conditioning—most complete line of residential controls in the industry!

HONEYWELL "Custom Control" Air Conditioning means you can give your customer *exactly* what he wants for any heating or heating-cooling need. You also offer your customer famous Honeywell quality and time-tested components. And you take advantage of the best field service in the industry, backed by years of engineering experience.

Get full information on the complete line of

Honeywell Control Panels for air conditioning. Call your local Honeywell office or write to Honeywell, Minneapolis 8, Minnesota.

Honeywell Round—World's most popular thermostat. This rugged and sensitive thermostat, available with a choice of Honeywell sub-bases, offers the most versatile control combinations possible.



Fast, Safe Descaling with

VAPCO

DRY POWDER
SCALE REMOVER

A Combination of:

- DU PONT SULFAMIC ACID for quick, effective action
- OUR OWN PATENTED INHIBITOR for extra safety to all metal surfaces, even zinc or galvanize

SEE YOUR WHOLESALER
OR WRITE US TODAY

GARMAN CO., INC.

1253 GROVER RD.
ST. LOUIS 23, MO.

7 Ceiling-Suspended 5-Ton Air-Cooled Package Units Air Condition Tool, Die Shop, Save Production Space

By George M. Hanning

DETROIT—Seven 5-ton Frigidaire air-cooled packaged air conditioners suspended from the ceiling of a tool and die firm here provide comfort cooling in the production area where no floor space could be spared for air conditioning machinery.

The installation was made in the plant of the Westlof Tool & Die Co. by Ed Beaver of B & T Refrigeration, Frigidaire air conditioning dealer.

"At about \$388 per ton, the air-cooled equipment employed cost Westlof no more than water-cooled packaged units and a cooling tower," Beaver said. "At 90° F. outside temperature, he can get nearly full capacity out of the air-cooled units."

The seven evaporator sections are suspended 15 ft. above the floor and are spaced evenly along the center beam of the 120 by 60-ft. plant.

Adjacent units have their blowers facing in opposite directions so that cooling is provided equally on both sides of the plant.

Mounted on the roof immediately above the evaporator sections are the condensing units, their 700 lbs. apiece supported by the center beam.

Beaver pointed out that 35 tons of cooling are able to handle this particular plant because the machinery used is not of the heat producing type. In addition, a 5-in. Gypsum roof pro-

vides a lot of insulating value. Some 40 men work in the shop.

While the 15-ft. height for the blower sections is considerably higher than would be the case if floor mounted units were used, Beaver does not expect that this will make any material difference in the cooling load.

Grilles on the blower units are equipped with 30° multiple direction deflectors which direct the air downward and outward from the unit.

Three thermostats mounted about 6 ft. high on center poles govern the operation of the blower units. One thermostat controls the three center units and one each controls the two end units.



SEVEN condensing units, weighing 700 lbs. each are supported on the center beam of the building. Putting them on the roof makes them readily accessible for service without disturbing operations in the shop, says Ed Beaver of B & T Refrigeration, who made the installation.

SUSPENDED from the ceiling of the Westlof Tool & Die Co., Detroit are seven air conditioning units such as these, alternately facing in opposite directions to cool the entire shop. Units are cradled between strips of 2 by 2 by 1/4-in. angle iron anchored to the center beam. Supply grille is deflected downward 30° to put cooling at level where needed.



"By changing one wire on the General Controls 'stats,' Beaver declared, 'the fans can be changed from continuous operation to cycle with the compres-

sor, or just the reverse. 'Comfort air conditioning in production areas is a coming thing in Detroit,' states Beaver. 'Westlof has had a packaged unit cooling the office space for some time. Last year, he decided that the men in the shop should enjoy the same benefits as the office workers. This installation was the result.'

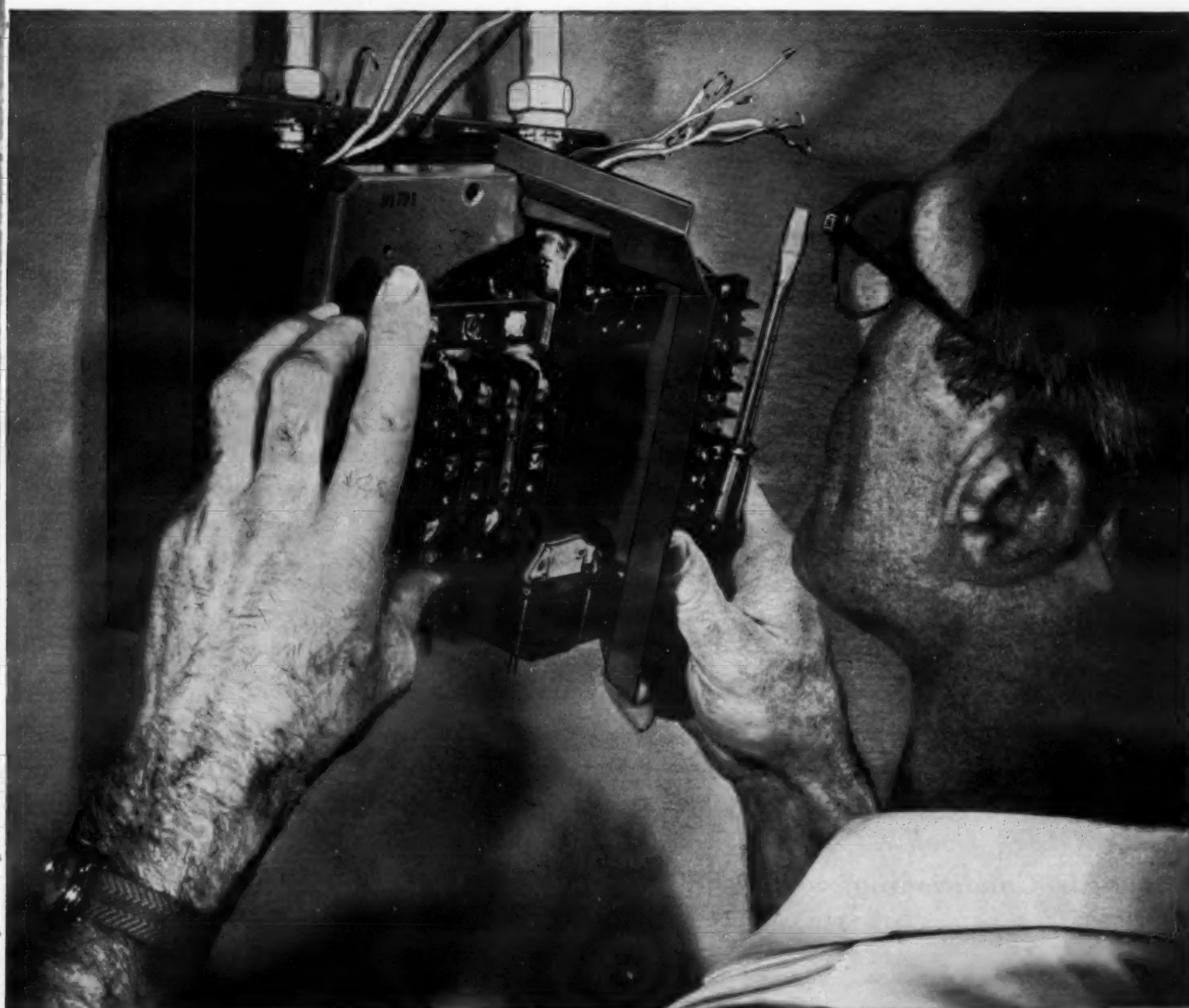
Great Falls Distributor Moves to Larger Quarters

GREAT FALLS, Mont.—Temperature Supply Co. (formerly Refrigeration Supply Co.) has moved to larger quarters at 515 Second Ave. S. here.

The firm serves northern and western Montana, distributing equipment, parts, and supplies to the refrigeration, air conditioning, and heating companies in that area.

To Cool College Bldg.

SALT LAKE CITY—Atkin Plumbing & Heating Co., Cedar City, presented the low bid of \$66,348 for air conditioning the new Union Bldg. at Utah State Agricultural college in Logan.



Taking easily removable sub panel from box without breaking conduit connections for field servicing or replacement. Note new Honeywell-built contactor.

CHOOSE FROM A WIDE VARIETY OF OUTSTANDING CONTROL PANELS— ALL WITH EXCLUSIVE SIMPLIFIED WIRING*

For larger packaged units or for year-round combination heating-cooling systems, the WA 212 (shown above) provides either automatic or semi-automatic control up to 40 amps. Adaptable to both air cooled and water cooled condensers, this rugged, versatile panel covers all applications from 2 to 10 HP.

For smaller cooling compressors—the R 447 (line voltage controller) and R 847 (low voltage controller) provide economical control for 1/2 to 2 HP compressors up to 22 amps.

For remote condensing sections—the W 400 (for heavy

duty) or the R 847B (for light duty) mounted outside on condensing section, with the W 226 (sequencing panel) mounted inside the house provide custom control for remote type air conditioning systems.

For 2-Ton packaged air conditioners—The W 402. Designed specifically to meet the needs of packaged units up to 2 HP.

*Honeywell's exclusive Simplified Wiring is the result of improved engineering design that permits factory wiring of the heating-cooling circuit. It means less installation time, longer trouble-free service.

For more information call or write Honeywell, Dept. AN-2-23, Minneapolis 8, Minnesota.

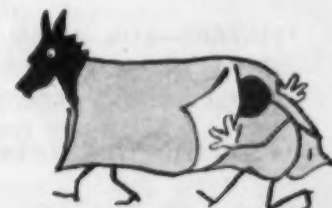
MINNEAPOLIS
Honeywell

Air Conditioning Controls



112 offices across the nation

For more information about products advertised on this page use Information Center, page 22.



GET IN AND SEE
WALTON'S BOOTH
#434 AND SEE

NEW HUMIDIFYING
UNITS FOR ANY DUCT
CIRCULATING SYSTEM

Walton

Laboratories, Inc.
Irvington 11, N. J.

15 Mfrs. B.t.u. Ratings--

(Concluded from Page 1)

weeks that they will publish their ratings in future publications of specifications and consumer literature, and will supply ARI with the test data as soon as completed.

The products of 22 manufacturers who said they would participate in the program, initiated last September, constitute almost 90% of the entire U. S. output, according to the ARI.

"While agreeing that cooling capacity is not the only sales feature, or basis of comparison, these manufacturers recognized the need for establishing some common basis which would provide an understandable measuring stick for the public—a measurement which would dispel confusion which has grown up as a result of rating the capacity of room air conditioners in terms

of 'tons' and 'horsepower,' neither of which has a direct relationship to cooling capacity," it was pointed out.

"While B.t.u.'s have been used by some manufacturers in the past, failure to use a uniform standard method of testing and rating has made the several previously used B.t.u. ratings unrealistic and of little value for comparative purposes."

Data on products of the 15 manufacturers, as released by the ARI follows:

ARI Standard Ratings

AIRTEMP		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
1675-12 Custom	¾	6,300	
1600-9 Custom Royal	1	9,500	
1600-10 Custom	1	9,100	
1600-11 Custom Royal	1	8,600	
1600-13 Custom Royal	1	8,400	
1615-1 Custom Royal	1½	12,900	
1620-1 Custom Royal	2	15,500	
*1775-3 Custom Royal	¾	6,600	
*1775-4 Custom	¾	5,600	
1850 Imperial	½	5,300	
1875 Imperial	¾	7,500	
1800 Imperial	1	9,000	

BIRTMAN ELECTRIC
(MIRA-COLD)

B.t.u./hr. Capacity In Accordance		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
775340 Standard	¾	5,650	
775100 Standard	1	7,900	
774150	1½	11,500	
774200	2	14,000	
773340 De Luxe	¾	5,850	
773100	1	8,600	
772150	1½	13,500	
772200	2	15,500	
770100 Custom	1	10,500	
770150	1½	15,500	
770200	2	16,600	

CARRIER		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
51T3-1155 Super Crestline	¾	7,450	
51T4-115	1	9,600	
51T3-115 Crestline	¾	7,450	
51T3-230 Crestline	¾	7,450	
51T3-208 Crestline	¾	7,450	
51T4-230 Crestline	1	9,600	
51T4-208 Crestline	1	9,600	
51T5-230 Crestline	1½	14,200	
51T5-208 Crestline	1½	14,200	
51A3-115 Starline	¾	7,450	
51A3-230 Starline	¾	7,450	
51A3-208 Starline	¾	7,450	
51A4-230 Starline	1	9,600	
51A4-208 Starline	1	9,600	
51A5-230	1½	14,200	
51A5-208	1½	14,200	
51W3-115 Console Weathermaker	¾	7,500	
51W3-230 Console Weathermaker	¾	7,500	
51W3-208 Console Weathermaker	¾	7,500	
51W4-230 Console Weathermaker	1	9,600	
51W4-208	1	9,600	

EMERSON ELECTRIC		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
AC7-10-15AT	1	8,600	
AC7-10-30D	1	9,100	
AC7-10-30T	1	9,500	
AC7-15-30D	1½	12,500	
AC7-15-30T	1½	12,900	
AC7-20-30T	2	15,500	
AC7-34-15AV Veri Slim	¾	5,400	
AC7-10-15AV Veri Slim	1	8,000	
AC7-15-30V Veri Slim	1½	11,800	
AC7-34-15AC Case-ment	¾	5,600	
AC7-10-15AC Case-ment	1	8,000	
AC7-34-15D Tiny Tim	¾	6,100	
AC7-34-15T Tiny Tim	¾	6,100	
AC7-34-15AD Tiny Tim	¾	5,500	
AC7-34-15AT Tiny Tim	¾	5,500	
AC7-10-15AD Tiny Tim	1	7,800	

FRIEDRICH		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
7*W7515 Floatingair	¾	9,150	
7*W10025 Floatingair	1	12,050	
7*W15025 Floatingair	1½	18,040	

FRIGIDAIRE		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
A50-57	½	4,500	
AE75S-57	¾	6,500	
AE75-57	¾	8,200	
A100-57	1	9,000	
AE100S-57	1	9,100	
AE100-57	1	10,000	
AE150-57	1½	14,600	

GENERAL ELECTRIC		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
R-31P Thinline Deluxe	½	5,500	
R-41P Thinline Deluxe	¾	6,600	
R-51P Thinline Deluxe	¾	7,500	
R-61P Thinline Deluxe	1	9,000	
R-71P Thinline Deluxe	1	10,100	
R-101P Thinline Deluxe	1½	13,350	
R-53P All-Weather Thinline	¾	7,400	
R-73P All-Weather Thinline	1	9,900	
R-52P Custom Thinline	¾	7,700	
R-72P Custom Thinline	1	10,100	

GIBSON		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
A-721C De Luxe	¾	6,700	
A-731C De Luxe	¾	6,200	
A-121C De Luxe	1	8,200	
A-152C De Luxe	1½	12,000	
A-222C De Luxe	2	16,000	
A-751C Trimline	¾	6,700	
A-781C Trimline	¾	6,400	
A-102C Trimline	1	8,200	
A-131C Trimline	1	8,200	
A-122C Trimline	1	9,000	
A-181C	1	9,000	

HOTPOINT		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
7AM75 Wind-o-slim	¾	6,775	
7AMS100 Wind-o-slim	1	8,197	
7AM100 Wind-o-slim	1	8,230	
7AM150 Wind-o-slim	1½	11,550	
7ADS100 Sill-o-ette	1	8,535	
7AD100 Sill-o-ette	1	10,040	
7AD150 Sill-o-ette	1½	12,380	
7AMC50	½	5,075	
7ADC75	¾	6,560	
7AD200	2	15,540	

HUNTER FAN & VENTILATING		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
75570-237 Deluxe	¾	6,300	
100571-240 Custom Deluxe	1	9,500	
100570-240 Deluxe	1	9,100	
100571-238 Custom	1	8,600	
100571-235 Custom	1	8,400	
150570-240 Deluxe	1½	12,900	
200571-240 Custom	2	15,500	
75579-239 Custom Casement	¾	6,600	
7578-237 Deluxe Casement	¾	5,600	
70574-239 Thin Model Window	½	5,300	
75574-239 Thinline Window & Wall	¾	7,500	
100574-240 Thinline Window & Wall	1	9,000	

Name and Model Number		B.t.u./hr. Capacity In Accordance	
		Nominal Hp.	w/ARI 110-56
E50AP "Snorkel"		½	4,900
E50APH "Snorkel"		½	4,900
E75AP "Snorkel"		¾	7,500
EG75AP "Snorkel"		¾	7,500
EM75AP "Snorkel"		¾	7,500
E75APH "Snorkel"		¾	7,500
EG75APH "Snorkel"		¾	7,500
EM75APH "Snorkel"		¾	7,500
E100AP "Snorkel"		1	9,000
EG100AP "Snorkel"		1	9,000
EM100AP "Snorkel"		1	9,000
E100APH "Snorkel"		1	9,000
EG100APH "Snorkel"		1	9,000
EM100APH "Snorkel"		1	9,000
E100APR "Snorkel"		1	8,800
EG100APR "Snorkel"		1	8,800
EM100APR "Snorkel"		1	8,800
E50 Yorkaire		½	4,900
E75 Yorkaire		¾	7,500
EW75 Yorkaire		¾	7,500
E75L Yorkaire		¾	6,250
EW75L Yorkaire		¾	6,250
E75R Yorkaire		¾	7,400
E100 Yorkaire		1	9,500
E100L Yorkaire		1	9,000
E100R Yorkaire		1	9,300
E150 Yorkaire		1½	14,300
E200 Yorkaire		2	16,000

KELVINATOR		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
RCG 101R Deluxe	1	8,230	
RCG 78RS Custom	¾	6,775	
RCG 108 RS Custom	1	8,195	
RCG 108R Custom	1	9,340	
RCG 158R Custom	1½	11,550	
RCG 109WS Thin-Style	1	8,535	
RCG 109W Thin-Style	1	10,040	
RCG 159W Thin-Style	1½	12,380	
RCG 209R Masterpiece	2	15,540	
RCG 78C Casement	¾	6,560	

SEARS, ROEBUCK		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
775340 Standard	¾	5,650	
775100 Standard	1	7,900	
774150	1½	11,500	
774200	2	14,000	
773340 De Luxe	¾	5,850	
773100	1	8,600	
772150	1½	13,500	
772200	2	15,500	
770100 Custom	1	10,500	
770150	1½	15,500	
770200	2	16,600	

O. A. SUTTON (VORNADO)		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
W 100C "Twin-Thin"	1	8,535	
W150C "Twin-Thin"	1½	12,380	
D50C "Deluxe"	½	5,360	
L75C "Deluxe"	¾	6,775	
D100C-1 "Deluxe"	1	8,195	
S100C "Deluxe"	1	8,230	
D100C-2 "Deluxe"	1	9,340	
D100C-3 "Deluxe"	1	9,340	
D150C "Deluxe"	1½	11,550	
A200C "Custom"	2	15,540	
C75C Casement	¾	6,560	
C50C Casement	½	5,075	

WESTINGHOUSE		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
RW-200D2 "200"	2	16,600	
RW-75D De Luxe	¾	7,700	
RW-75D2 De Luxe	¾	7,700	
RW-100D2 De Luxe	1	10,800	
RW-150D2 De Luxe	1½	13,500	
RW-50S "Super"	½	5,400	
RW-75S7 "Super"	¾	6,600	
RW-100S "Super"	1	9,000	
RWR-100S "Super"	1	9,000	
RW-100S2 "Super"	1	10,100	
5AWC-75 Casement	¾	6,560	
5AWC-752 Casement	¾	6,560	

YORK		B.t.u./hr. Capacity In Accordance	
Name and Model Number	Nominal Hp.	w/ARI 110-56	
E50AP "Snorkel"	½	4,900	
E50APH "Snorkel"	½	4,900	
E75AP "Snorkel"	¾	7,500	
EG75AP "Snorkel"	¾	7,500	
EM75AP "Snorkel"	¾	7,500	
E75APH "Snorkel"	¾	7,500	
EG75APH "Snorkel"	¾	7,500	
EM75APH "Snorkel"	¾	7,500	
E100AP "Snorkel"	1	9,000	
EG100AP "Snorkel"	1	9,000	
EM100AP "Snorkel"	1	9,000	
E100APH "Snorkel"	1	9,000	
EG100APH "Snorkel"	1	9,000	
EM100APH "Snorkel"	1	9,000	
E100APR "Snorkel"	1	8,800	
EG100APR "Snorkel"	1	8,800	
EM100APR "Snorkel"	1	8,800	
E50 Yorkaire	½	4,900	
E75 Yorkaire	¾	7,500	
EW75 Yorkaire	¾	7,500	
E75L Yorkaire	¾	6,250	
EW75L Yorkaire	¾	6,250	
E75R Yorkaire	¾	7,400	
E100 Yorkaire	1	9,500	
E100L Yorkaire	1	9,000	
E100R Yorkaire	1	9,300	
E150 Yorkaire	1½	14,300	
E200 Yorkaire	2	16,000	

MARSH Instruments

THE SERVICEMAN LINE of Testing Gauges, Testing Thermometers, Timers, etc.

PRESSURE GAUGES and Dial Thermometers for all services.

MARSH-ELECTRIMATIC, Water Regulating Valves, Solenoid Valves.

MARSH INSTRUMENT COMPANY
Sales Affiliate of Jas. P. Marsh Corporation
Depr. D., Skokie, Ill.

MINERALLAC PERFORATED STRAP

Versatile Hanger Iron

Safely supports hanging pipes, conduits and cables up to 500 lbs. ¾ in. 20 gauge electro-galvanized steel. ¼ in. holes on ½ in. centers. Various lengths available. Send for literature.

MINERALLAC ELECTRIC COMPANY
25 N. PEORIA ST. • CHICAGO 7, ILL.

NEW LOW PRICES

A STEP AHEAD—

Sees 10 Million Homes Air Conditioned Within Next 5 Years

Modernization of Existing Homes Will Account for Largest Percentage

TUCSON, Ariz.—Close to 10 million American homes will be completely or partially air conditioned within five years, it was predicted here by George F. Robinson, residential sales manager for Carrier Corp., in discussing the role of the heating and air conditioning industry in a sound home improvement program.

And the biggest part of this increase in usage will result from modernization of existing homes rather than installation in new homes, Robinson stated in a panel discussion before the National Congress of Operation Home Improvement.

NEARLY HALF OF UNITS GOING INTO EXISTING HOMES

He pointed out that nearly half of all central air conditioning systems for residences and the majority of room air conditioners are currently being sold for existing dwellings.

Describing the rise of air conditioning as a clear illustration of the changing aspirations of the American family, Robinson called for major emphasis on positive measures to improve and keep a home modern rather than on maintenance alone.

"Oldness in a home is a matter of obsolescence not of age," he declared. "A home need never grow old as long as it changes and grows to keep up with the life and constantly changing needs and desires of the family."

"One of the greatest services Operation Home Improvement can perform for the homeowner in helping him to raise his standard of living is to crystallize the possibilities for improving his home so that it can continue to meet his developing wants and aspirations."

"Every dollar spent in such a home improvement program adds to the value of the house and the cumulative pride of ownership. If this were to become an important concern of most homeowners today, there could never be a question of blight."

'ORGANIC' APPROACH TO HOME IMPROVEMENTS

Robinson stressed the importance of local demonstration projects to inform homeowners of the possibilities of improving their present residences, and made a plea for what he called the "organic" approach to home improvement.

"Any major step in improving a home calls for intelligent consideration of all of the func-

tional elements in the home—the organization of living space, the electrical system, the plumbing, and the heating and air conditioning system.

"The residence owner who adds an extra room and doesn't take a good long look at how he will handle the heating and air conditioning is building obsolescence into his home. He is doing the same if he installs a heating plant without planning it for future addition of air conditioning."

"Air conditioning can increase the available living space in a home by as much as one-third or one-half in many cases. If

the basement is too damp to use satisfactorily in the summer-time when the heat is turned off, dehumidification through air conditioning can make this into perfectly good space for recreation, hobbies, and entertaining throughout the year."

3-STEP PROGRAM FOR MODERNIZATION OUTLINED

The Carrier official described a three-step program of cooperation between manufacturers and OHI in the development and acceptance of new ideas.

He named the first step as development of equipment or materials to bring new possibilities within reach of large numbers of people.

The next step, he said, was education involving a close tie between Operation Home Improvement and manufacturers,

and he emphasized the role of local demonstration homes in this part of the program.

"The local demonstration home offers us a chance to talk face-to-face with the homeowner to help him work out this integration of the various steps in his home improvement program, and such a method of imparting information is certainly the most effective communication of all."

Naming the third step as the selling process, Robinson said that manufacturers and retailers must make it easy for the homeowner to get what he wants.

He described a new procedure developed by Carrier for its dealers which makes use of packaged tables and a simple slide rule. Working together,

the homeowner and salesman can determine the best approach to air conditioning, the capacity needed, and the location of ducts and outlets, and can price out the installation and sign the contract within a single evening, he explained.

Robinson said that the three-step approach outlined of equipment development, education, and good selling procedures would help make it possible for the air conditioning industry to progress into the great future which is obviously ahead.

"We believe the existing home offers one of the greatest single potentials for air conditioning sales," he declared.

"And it is this kind of activity by manufacturers and OHI which will keep the American home young and vital."

NOW! For really low-cost, easy installation with top profit margin...

Amana

Central-System Air Conditioning!



Air cooled, needs no water! • Fits in almost anywhere!
Cools entire homes, large or small!

Here is the highest-quality, most versatile, entire home air conditioning system on the market today! It's from Amana—world famous specialists in the field of refrigeration products for the home.

For you—new Amana Central-System Air Conditioning means *top-profit margin* on every sale and installation you make. And Amana *quality* assures minimum maintenance—years of untroubled effi-

ciency and dependable operation!

So Easy to Install! This amazingly flexible system adapts easily, conveniently to almost any home's needs. Tucks away quickly, with minimum cost and effort, in attic, basement, utility room, even crawl space!

No Big Crew Needed! You can install Amana Central Systems any time of the year. Spreads labor costs, cuts waste time—gives you a better margin of profit!

New Prefab Air Duct System!

Where existing duct work can't be used—or supplementary ducting is needed—Amana's optional new Fiberglas air duct system can be installed easily and conveniently.

Entire-Home Cooling Capacity!

Ultra-powerful 2- or 3½-horsepower models will cool homes up to 2200 square feet in area. Multiple units provide ultimate in flexibility and cooling for larger homes.

Add new Amana Central-System Air Conditioning to your line today—
 and you'll add new sales, new profits, automatically!



Producers of World-Famous Amana Freezers • Freezer-Plus-Refrigerators
 Built-In Freezers and Refrigerators • Room Air Conditioners
 Central-System Air Conditioning • Deepfreeze® Chest Freezers
AMANA REFRIGERATION, INC., AMANA, IOWA

Amana Refrigeration, Inc., Amana 14, Iowa
 Gentlemen: I am interested in knowing more about: Amana Central-System Air Conditioning.

Name _____

Company _____

Address _____

City _____ State _____

The words Amana and Deepfreeze are trademarks, Reg. U. S. Pat. Off.

PRESSTITE Insulation Adhesives

- quick, permanent adhesion
- long-lasting high bond
- excellent resistance to temperature extremes
- brush, spray or flow

See your wholesaler or WRITE

PRESSTITE-KEYSTONE
Engineering Products
COMPANY

39th & Chouteau, St. Louis, Mo.

For more information about products advertised on this page use Information Center, page 22.

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark
reg. U.S. Pat.
Office;
Est. 1936AIR CONDITIONING
& REFRIGERATION **NEWS**Copyright
1957,
Business News
Publishing Co.

F. M. COCKRELL, Founder

'The Conscience of the Industry'

Published Every Monday by BUSINESS NEWS PUBLISHING CO., 450 W. Fort St., Detroit 26, Mich. Telephone Woodward 2-0924. Subscription Rates: U. S. and Possessions and Canada: \$6.00 per year; 2 years, \$9.00; 3 years, \$12.00. All other countries: \$10 per year. Single copy price, 40 cents. Ten or more copies, 30 cents; 50 or more copies, 20 cents each. Send remittance with order.

EDITOR & PUBLISHER,
George F. TaubeneckEDITORIAL DIRECTOR,
Phil B. RedekerASSOCIATE EDITOR,
C. Dale MericleASSISTANT EDITORS:
John Sweet
Hugh Mahar
George Hanning
Robert Lacey

RESEARCH MGR., John MacLean

GEN. MGR., Warren Jones

GEN. PROD. MGR., Walter Schuler

ADV. PROD. MGR., A. M. Barrow

CIRCULATION MGR., Herbert Spencer

SUBSCRIPTION MGR., Rosalie Ashley

READER'S SERVICE MGR.,
Vincine Mogyorodi

PRESIDENT, Edward L. Henderson

ADV. MGR., Robert M. Price

WESTERN ADV. MGR.,
Allen Schildhammer

ASST. ADV. MGR., Joe Sullivan

ADVERTISING REPRESENTATIVES:
Rex Smith
William Zurkan

ADVERTISING OFFICES:

New York: 521 Fifth Ave.
Murray Hill 2-1928-9
Robert M. Price
William Zurkan
Chicago: 134 S. LaSalle St.
FRanklin 2-8093
Allen Schildhammer
Rex Smith
Detroit: 450 W. Fort St.
WOODward 2-0924
Joe Sullivan
Los Angeles: 4710 Crenshaw Blvd.
AXminster 2-9501
Justin Hannon

Member, Audit Bureau of Circulations, Member, Associated Business Publications.

VOLUME 80, No. 7, SERIAL No. 1,456, FEBRUARY 18, 1957

They'll
Do It
Every
Timeby
Jimmy
Hatlo

Whatever You Call Them They Are Necessary

Lacking a nationwide structure of distributors, wholesalers, jobbers, and contractors—only a limited number of the largest manufacturers and biggest retailers could get along in America's competitive race for volume and profits.

Small businessmen whether retailers or manufacturers, soon would become extinct... if a friendly, personally interested wholesaler didn't exist to help them solve their problems and erase their woes.

Neither the producer who sells to a nationwide market nor the retailer could long sustain that tremendous investment in inventory, personnel, and guidance which a good wholesaler provides for them.

As a matter of fact, finding an aggressive distributor who is adequately financed is the present BIG problem for most manufacturers in our industry.

Our American economy is cushioned by its six-figure-credit wholesalers. Purchasing, warehousing, financing, and promotional functions which they take care of would comprise an impossible burden for most retailers. That we know by virtue of hundreds of interviews with dealers and contractors down through the years.

Distributors, jobbers—whatever you may

call them—assist the manufacturer at every stage of the latter's operations on a consulting basis. Example: a wholesaler who's ear is near the ground can give prompt warning of changes in popular taste to a manufacturer—and thus help the latter keep his products designed ahead of his competitors.

In this connection, President Eisenhower has advised the National Association of Wholesalers:

"In a growing economy there is an increasing need for the effective and widespread distribution of goods. Your clinic should stimulate salesmanship and help furnish new answers to many current wholesale marketing problems. Increased sales will help to increase output and employment, and to raise our people's standard of living."

Ike wasn't just gumming when he said that.

Nobody yet has found a cheaper or better method of moving specialty products from factory to home than through a good wholesaler.

Maligned, neglected, and even abandoned at times, The Wholesale Distributor still is necessary. He provides a service that defies elimination.

wholesalers to support their parts and service department are completely eliminated for five years, or until the warranty has run out. The big-hearted manufacturers who offer this warranty do not consign to their dealers this large stock of replacement units; nor do they pay their dealers their normal profit on repair parts or service. Fourth, for the five-year period involved, the wholesaler and/or dealer has to handle at no profit all paper work involved in debiting and crediting the consumer and manufacturer for units involved. He even pays a state gross sales tax on such non-profit transactions.

WORKING CAPITAL TIED UP

In the process of handling with the manufacturer such transactions, a considerable amount of working capital may be tied up as long as six months while the factory is processing credits on exchange replacement compressors or cycles.

The situation was bad enough in the field when five-year warranties covered only the replacement of the material. Now, the factories have outdone themselves by offering free labor for the same period. It seems to me that manufacturers are being exceedingly generous with their wholesalers' and dealers' time and money.

One of the first things a manufacturer requires of his wholesaler or dealer is that he provide an ample supply of replacement parts. Second, he demands that they have a good service department with trucks, tools, etc. After his wholesaler and/or dealer goes to the expense of providing these facilities, he takes away five years of profit required to support them.

Few people are gifted with genius so that they are a master of all things. Many of the men in our industry are very good servicemen and/or engineers. They are not, however, necessarily good accountants and business analysts. Dealers and wholesalers become so hypnotized by the more immediate and pressing problems of stocking, selling, engineering, service-

ing, advertising, etc. that they overlook the leaks in the profit bucket as brought out above. Even if they do realize or recognize the problem involved, individuals are helpless in bringing about a remedy. An organized campaign must be set in motion by the various societies and associations representing our industry if we are going to eliminate the evils of the five-year warranty plan.

I sincerely believe that the manufacturers would be as glad to rid themselves of the five-year warranty plan as would be the wholesalers and dealers. They must, however, have a cross sectional opinion of their representatives. Once they know our feelings, it would be a simple matter for the manufacturers to agree among themselves to eliminate this business cancer. Factories recognize the fact that they cannot themselves be successful unless they have a dealer organization that is making profit and growing. The required rapid expansion of our industry demands additional capital investment. Most of this capital must come from business profits of the firms now selling and installing equipment. The money tied up by a company in stocking non-profit making five-year warranty compressors cannot be used for stocking new saleable equipment. The profit lost on free compressor exchange and service for five years is not available for hiring new salesmen or expansion.

SUGGESTS POLLING OF DEALERS

You have done a fine job of promoting the general welfare of the refrigeration and air conditioning industry in the past. I sincerely believe that you can render an additional invaluable service by starting an immediate campaign to eliminate the five-year warranty monster from our midst. Perhaps, the circulation of voting cards by manufacturers to their dealer organizations immediately would rid us of the problem quickly. Maybe a voting card in your NEWS might be better.

LARRY R. BARTON,



SEEKS AID IN ENDING 5-YEAR WARRANTIES

Barton Distributing Co.
Indianapolis 21

Editor:

I am writing in hope that I can solicit your interest in doing a series of editorials toward the end of discouraging five-year warranties on air conditioning equipment. I know of no other product sold that requires so much knowledge, application, and experience with so small a margin of profit as air conditioning equipment. The law of supply and demand will always govern the percent of profit applicable to a product, and our field is so crowded with manufacturers and suppliers who are either trying to get in or hang on that equipment markup has hit a dangerous low.

The practices and policies of our industry are dictated by

larger well known manufacturers; their distributors and dealers following the pattern set by the factories. When the five-year warranty was first conceived by a single manufacturer, he had a selling point; then was cancelled out when all of his competitors offered the same feature. The consumer, at the expense of the industry, is the only benefactor of this fantastic warranty.

AUTO INDUSTRY GIVES ONLY 90-DAY WARRANTY

Does any other industry stick their dealers' necks out for five years of free service? An automobile that operates perhaps 10% of the hours per year that an air conditioner operates is guaranteed for 90 days or 3,000 miles, whichever occurs first. Most appliances are guaranteed for one year.

Here is the problem faced by

the wholesaler, distributor, or dealer in our industry. First, the manufacturer sets the charge for a five-year warranty, and the wholesaler and dealer have to pass on to the consumer exactly the same cost that they are charged by the manufacturer. The dealer is allowed neither a sales tax or profit on this warranty charge. Second, the wholesaler and/or dealer must maintain at his own expense in his own warehouse for a period of five years an ample inventory of replacement compressors or cycles to make immediate free replacement on machines that somehow weren't designed to run forever. The investment required by the wholesaler or dealer to maintain a stock on his floor of ONE ONLY of each compressor covered by such free warranty, based on a range of 2 hp. through 7½ hp. with several models and voltage characteristics, is approximately \$7,500 to \$10,000!!! Third, service profits that are normally needed and expected by dealers and

Nelson Trustee Sues To Set Aside Heller Loan, Asks \$3,500,000

ST. LOUIS—Suit was filed in Federal District Court here by Elliot H. Stein, trustee for the bankrupt N. O. Nelson Co., refrigeration, heating, and plumbing supply firm, and its subsidiary, Joplin Supply Co., against Walter E. Heller & Co.

The suit seeks to have a disputed \$3.6 million loan from Heller declared "fraudulent and void," and asks a total of \$3.5 million in actual and punitive damages.

The disputed loan was made by Heller to the Nelson company around Dec. 5, 1955, but Nelson never received the money. It went directly to Bellanca Corp. which at that time controlled Nelson.

Stein asked the court to order Heller to return \$2,204,458 Nelson has paid to Heller on the disputed loan in payments and \$257,712 paid as interest and service charges on an original loan of \$3.4 million, it was reported.

He also requested return of \$48,501 in payments and \$21,598 in interest and service charges on an original loan of \$200,000 to Joplin Supply.

In addition, Stein is seeking to recover \$2.5 million as actual damages to the Nelson business and goodwill as a result of the disputed loan, and \$1 million as exemplary and punitive damages.

Heller, a Chicago factoring and financing firm, filed suit against Sydney L. Albert, president of Bellanca, in Cleveland Federal court Jan. 3 seeking to collect \$1,348,287 still owed by Nelson and Joplin Supply on the disputed loans. On Oct. 14 in St. Louis, Federal Bankruptcy referee William O'Herin had ruled that Stein could halt payments on the loan from Nelson's accounts receivable.

Stein has charged in his suit that the loans were a "conspiracy" and a "fraudulent scheme" by Heller and Bellanca, it was noted.

N. O. Nelson Unrelated To C. Nelson Mfg.

ST. LOUIS—There is no relationship between N. O. Nelson Co. and C. Nelson Mfg. Co., both of St. Louis, the latter firm pointed out recently.

It was said the "current widely-publicized litigation in-

volving the bankrupt N. O. Nelson Co. has been the cause of considerable embarrassment and misunderstanding to C. Nelson Mfg. Co."

C. Nelson Mfg. Co., it was explained, makes ice cream cabinets, as well as frozen food cabinets, merchandisers, and soda fountains, "sold all over the world to ice cream manufacturers, frozen food distributors, and their outlets."

"There is no relationship whatever, either financially or personally, between this firm and N. O. Nelson Co., distributor of plumbing supplies and other material and equipment sold to the plumbing, heating, and air conditioning trade."

"The operation of C. Nelson Mfg. Co. is wholly controlled by the family of the late Charles Nelson, founder of the company in 1898. James L. Nelson is chairman of the board, and Charles W. Nelson is president," it was stated.

Seek Colorado 'Death Trap' Law

DENVER—A bill prohibiting the dumping of any refrigerator, icebox, or other cabinet that cannot be opened from the inside was introduced in the legislature by Sen. Donald Dunklee of Denver.

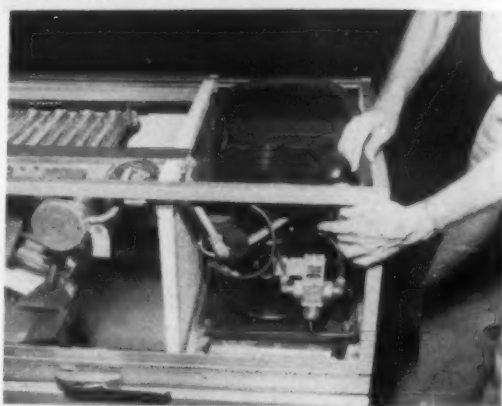
ASRE Offers 3 Rating, Testing Standards

NEW YORK CITY—Three new ASRE standards are now available from the American Society of Refrigerating Engineers, 234 Fifth Ave., here, the organization recently announced.

Standard 29-56, "Method of Rating and Testing Ice Makers," is available as revised at 75¢ a copy. In addition to basic term clarification, information on a method of calorimetry is included, it was stated.

Standard 35A-56, "Method of Testing Desiccants for Refriger-

A NEW quick and easy way to apply Rubatex closed cellular rubber insulation tubing on refrigeration tubes has been devised by Uniflow Mfg. Co., Erie, Pa., in its "Kold-Draft" automatic ice cube maker. The assemblyman slips one end of the Rubatex over the tube, then applies an air hose at the other and slides the material down over the line. Uniflow also uses Rubatex on the cold water and refrigeration lines of six of its electric water cooler fountain models, both pressure and bottle type.



ant Drying," gives purpose, classification, and definition of terms, apparatus, preparation and analysis, procedures and handling of data. It is also priced at 75¢.

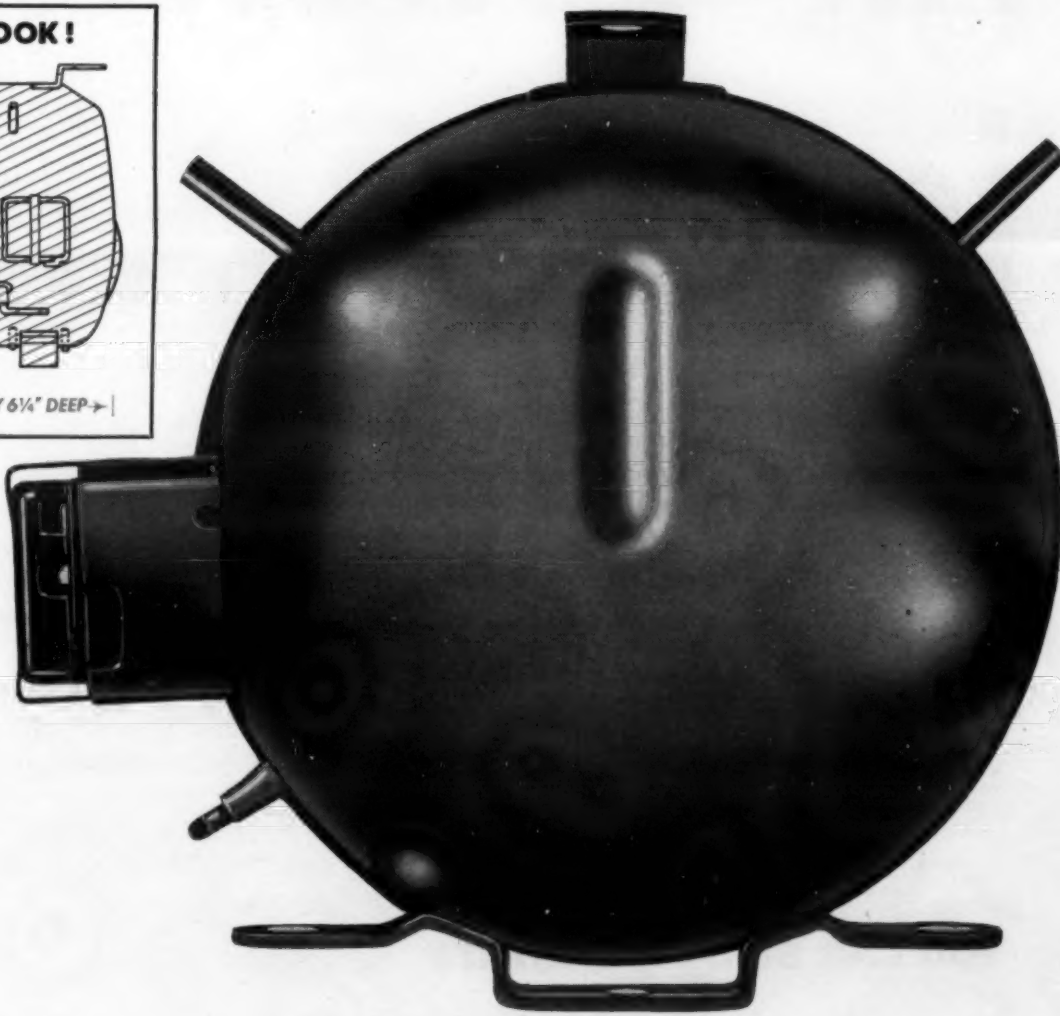
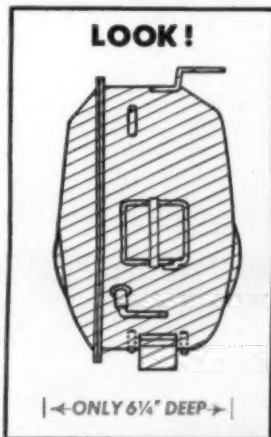
For \$1 a copy, Standard 35B-56, "Methods of Rating and Testing High Side Liquid Line Driers," for use with Refrigerant 12 or Refrigerant 22 is available, it was added.

Rheem Net Sales Up

SAN FRANCISCO—Rheem Mfg. Co. had net sales of about \$173 million in 1956, compared with \$160,619,990 for 1955, A. Lightfoot Walker, president, estimated.

He added that Rheem International had sales of around \$31 million last year against \$27 million the previous year.

NOW AVAILABLE... NEW "SPACE-SAVER" HERMETICS DEVELOPED BY KELVINATOR



LOOK!
ONLY
10 1/2"
HIGH

LOOK! ONLY 11 3/8" WIDE

**COMPACT, LIGHT WEIGHT, HIGH CAPACITY, TOP QUALITY
... ONLY 10 1/2" HIGH x 11 3/8" WIDE x 6 1/4" DEEP!**

Kelvinator now is in production on a series of new, truly compact sealed compressors. These advanced-design "Space-Saver" units have been thoroughly proved in volume testing of production runs. Available in models for natural or forced convection applications,

they are ideally suited for household refrigerators, freezers, water coolers, dehumidifiers, beverage coolers and many other refrigerated products. Write now for complete information to Contract Department, Kelvinator Div., 14250 Plymouth Road, Detroit 32, Mich.

Kelvinator

Division of American Motors Corporation • Detroit 32, Michigan



AMERICAN MOTORS MEANS
MORE FOR AMERICANS

SPECIALISTS IN REFRIGERATION SINCE 1914

For more information about products advertised on this page use Information Center, page 22.

MIGHTY MITE
MOTOR PROTECTORS

FOR MOTOR OVERLOAD PROTECTION

MECHANICAL INDUSTRIES PRODUCTION COMPANY
223 ASH STREET • AKRON, OHIO

UL

Westinghouse Packaged Air Conditioning is.....

Now Westinghouse Air Conditioning, long famous for dependability, is also the quietest in the industry! And has new sales appeal in the most complete and handsomely styled line available.

Westinghouse engineers achieved this enviable quietness by a complete redesign. Here's what they did: de-tuned the gas chambers of the compressor, designed a far more efficient muffler, engineered out objectionable frequencies, killed remaining noise in an acoustical chamber isolated from the air stream.

Result?—"whisper-quiet" operation in all units . . . satisfied customers. What's more, Westinghouse gives you the most *complete* air conditioning "profit-family" in the industry—air or water-cooled units for any installation plus the all-new 1957 Westinghouse line of gas and oil-fired furnaces, manufactured with air conditioning in mind.

These are just several reasons why a Westinghouse franchise is so highly valued by leading contractors and dealers throughout the country.

*See Westinghouse . . . the only all-new line in Air Conditioning
... at the International Heating and Air-Conditioning Exposition*

YOU CAN BE SURE... IF IT'S

Westinghouse

AIR CONDITIONING DIVISION

STAUNTON, VIRGINIA

J80534A

..... quiet!

Men on the Move . . .

Brunner Mfg. Co.—GEORGE C. MUMFORD, secretary-treasurer has been elected to the board of directors. He has served as financial officer since 1953 and will fill the vacancy caused by the recent death of A. James Eckert who has served as chairman of the board's executive committee for several years.

Worthington Corp.—SYLVAN R. HIRSCH, formerly manager of engineering at Holyoke Div., has been appointed assistant to the vice president-engineering at Harrison Div. FREDERICK B. SEEL succeeds him as manager of engineering at Holyoke. Seel has been assistant manager of engineering.

Frigidaire Div., General Motors Corp.—WILLIAM F. CRONIN has been named manager of Frigidaire Sales Corp. branch in Oakland, Calif., succeeding WILLIAM I. BUCHANAN who died recently. EDMUND E. BOCKOCK has been appointed manager of the Atlanta

branch, succeeding FRED M. DAVISON who is on extended leave of absence due to his health. Cronin has been appliance sales manager at Oakland. Bockock served as service, sales, and general sales manager of the Atlanta branch.

Trane Co.—JAMES WHALEN, formerly manager of convector sales, has been promoted to head the firm's transportation sales section. His new assistant will be KENNETH SHANNON, formerly compressor and "Cold Generator" engineering salesman. Replacing Whalen as convector manager is L. E. DANIEL, formerly "Uni-Trane" air conditioning salesman.

American-Standard—WARREN CAMPBELL has been appointed training supervisor of the Air Conditioning Div. heating and air conditioning school. He has served as assistant training supervisor. He succeeds ROBERT WILSON who was recently named product manager. Appointment of three

new general managers in the manufacturing department of the Plumbing & Heating Div. were announced. GEORGE M. MAIER, formerly manager of works operation of the heating group, was named general manager of heating plants. FRANK P. WEIL, formerly vice president-manufacturing in the Air Conditioning Div., was named general manager of enamel plants. ALBERT S. ADCOCK, member of the manufacturing staff, was appointed general manager of potteries. In addition, a new sales office for the Philadelphia district of the Plumbing & Heating Div. has been created with BRENDAN P. O'CONNELL as manager. GERHARDT D. BRUGGEMANN, JR. has been named manager of the Milwaukee sales office to succeed FREDERICK R. DANNIES who will work on special assignment. Bruggemann has been a salesman in the Cincinnati office.

York Corp., subsidiary of Borg-Warner Corp.—J. V. CLIPPINGER has been named manager of accessory equipment and maintenance sales for the Industrial Div. He

had been serving as supervisor of AE&M product sales since 1954. J. W. GERRARD has been appointed St. Louis branch manager, Commercial Div. He formerly was sales administrator of room air conditioners in the home office.

National-U. S. Radiator Corp.—JOHN W. ARNOLD has been named branch manager of the Pittsburgh branch, Heating & Air Conditioning Div. He has served as a salesman in that office, now succeeds CECIL T. HALE, who is retiring.

Carrier Corp.—Appointment of LESLIE MEIKLEHAM as chief purchasing agent of the Unitary Equipment Div. was announced. He has held various posts in the purchasing department. STANLEY A. FREDERICKSON has been named manager of the new Phoenix, Ariz. branch office of the Machinery and Systems Division. The office's territory includes Arizona, southeastern California, and southern Nevada.

A. M. Byers Co.—J. FREDERIC BYERS, JR., president and a director, has been elected chairman

of the board. A brother, B. M. BYERS, also a director, was elected president. He has been vice president-sales.

Whirlpool-Seeger Corp.—Promotion of ROBERT P. LEWIS to consumer relations director for RCA Whirlpool and Estate home appliances was announced. He was formerly Cleveland regional sales manager. MELVIN GAYER has been appointed district manager, refrigeration, for the district comprised of Indianapolis, Louisville, Ky., and Peoria, Ill., and Benton Harbor, Mich. He was associated with Philco Corp. as a district representative in the midwest.

Tuthill Pump Co.—JOHN W. SEE has been named regional sales manager for New England, New York, New Jersey, and eastern Pennsylvania.

L.O.F. Glass Fibers Co.—RICHARD E. DAMM has been appointed general office manager in addition to his position as credit manager. BERNARD KATZ, formerly both general office manager and systems and procedures manager, will now devote full time to the latter position. JAMES A. DENNIS has been named to the manufacturing division on special assignments. He has been undergoing a management trainee program.

Iron Fireman Mfg. Co.—T. M. ABATE has been named purchasing agent for the Cleveland plant to succeed A. L. WALLACE, who is retiring. Abate has been purchasing agent and chief engineer for Swenson Thermal Research, Inc., an Iron Fireman subsidiary.

Refrigeration Discount Corp.—ALBERT L. SUTTON, formerly assistant manager of the western region, has been named regional manager of the southwestern region, succeeding C. E. NICHOLSON. OTIS M. SMITH has been promoted to assistant regional manager for the western region while ROBERT B. LILES will succeed him as Oakland branch manager. Liles has been assistant branch manager. DOYLE D. MCKINNEY has been named assistant manager of the Detroit branch replacing J. R. POWELL, recently upped to manager. McKinney has been credit and collections manager.

Flexonics Corp.—MEL E. MAURER was named to serve as a member of the executive staff and as general manager of Flex-O-Tube Div. JAMES L. CULLEN has been named assistant sales manager of the Hose Div. He has been the sales representative for the division in the Chicago area.

Cherry-Burrell Corp.—NORMAN W. NELSON and HOWARD HALL were elected directors.

Bell & Gossett Co.—ARTHUR T. WOERTHWEIN was appointed secretary.

Otto Bernz Co. (Rochester, N. Y.)—STEPHEN E. MCPARTLIN, JR. has been named district manager of the newly set up midwest regional sales district with offices in Chicago. He was last with Ideal Metal Products, Inc. as sales manager.

Kelvinator Div., American Motors Corp.—LAWRENCE P. KNIPE, former sales promotion manager for the Kansas City zone, has been named retail marketing sales promotion manager for Kelvinator's national organization. He succeeds M. C. CAMERON, who has been made manager of dealer development.

Surface Combustion Corp.—ALBERT L. HOLLINGER, vice president, has been appointed vice president in charge of sales of all industrial divisions, including Kathabar Air Conditioning.

The Ebco Mfg. Co.—ALBERT L. HANCOCK has been appointed public relations manager. He has been in public relations with Boeing Airplane Co., Wichita, Kan.; CBS television in Phoenix, Ariz.; and Air Force motion pictures in the Los Angeles area.

*in how many combinations
do manufacturers use*

SUPER-FLO FILTER-DRIERS?



Available with
SAE flare or sweat
connections in brass
or steel thru 20 tons.

More than 100 manufacturers specify Super-Flo Filter-Driers as original equipment. Many use this outstanding filter-drier in combination with some other Remco component.

The air conditioning and refrigeration manufacturer rush to Remco Super-Flo began as a result of . . . low, low cost . . . massive depth filtering which removes unprecedented quantities of minute foreign particles . . . permanent drying at peak efficiency even at liquid line temperatures through 150°F . . . excellent acid control . . . and no measurable pressure drop!

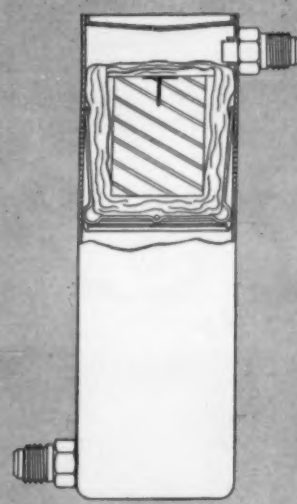
Manufacturers found the U/L approved steel shell makes a wonderful receiver. Now by adding a U/L approved Remco E-Z-SEE Liquid Indicator . . . a high pressure Remco check valve . . . or a Remco safety device . . . the factory-assembled and tested combinations become virtually endless.

All Super-Flo Filter-Driers and combinations are tested, dehydrated and moisture-vapor sealed for your protection. Write for low net prices and for Bulletin R-11 which gives engineering details.

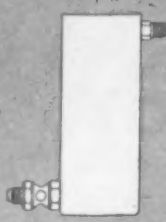
AVAILABLE TO THE TRADE THRU
WHOLESALEERS EVERYWHERE

REMCO INC.
ZELIENOPLE, PA.

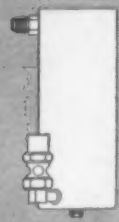
Receiver-Filter-Drier
Liquid Indicator remotely installed



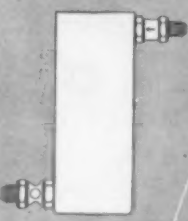
Receiver-Filter-Drier
Liquid Indicator



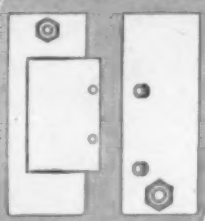
Receiver-Filter-Drier,
elbow mounted Liquid
Indicator, Safety Device.



Receiver-Filter-Drier
Liquid Indicator
with Check Valve.



Mounting bracket or
studs can be supplied
for any combinations.



100% STANDARD

6,300-Ton Absorption Units To Air Condition 10 Airport Terminal Bldgs.

SYRACUSE, N. Y.—The refrigerating plant for New York International Airport's projected "Terminal City" air conditioning system will be the world's largest installation of absorption refrigerating units, announces Charles V. Fenn, vice president, Machinery & Systems Div. of Carrier Corp.

A new contract placed by The Port of New York Authority with Carrier adds four absorption machines of 700 tons capacity each to the five already on order, bringing the total cooling output to 6,300 tons.

Consulting engineer for the big system is the New York firm of Seelye, Stevenson, Value, and Knecht.

The nine-machine installation will provide chilled water for the complete air conditioning of the 10 unit terminal buildings to be constructed around a landscaped oval of 655 acres. They will accommodate 140 aircraft at one time, and will be capable of handling over 8,000,000 passengers a year.

The refrigeration contract is part of a \$90 million program to be completed by 1965.

The cooling plant will be more than half-again larger than any of the three biggest systems installed previously in the New York area—in the Socony-Mobil building, the New York Coliseum, and the United Nations headquarters. All of these employ Carrier equipment.

The water chilling machines will use hot water to produce cooling. Most previous absorption machine installations have had steam as the source of heat energy, Fenn stated.

The units are controlled by a pushbutton providing automatic "stop-go" operation. They have virtually no moving parts and can fluctuate from full to zero load and back to full again with little loss in efficiency, Fenn claimed.

distance of 11 city blocks. Entry area for international air travelers, it will be ready for use in mid-1957

Water Evaporation Produces Cooling

The absorption machines operate on the principle that evaporation of water produces cooling. Water vapor created in the process is absorbed by a salt solution. As the solution is

diluted, it must be continually strengthened.

This is done by pumping the weak solution to a generator where steam, hot water, or other hot solutions boil off excess water. The strong solution is returned to the cooling section to repeat the cycle.

At New York International Airport, high temperature, high pressure hot water will be employed to boil excess water from



MODERN power plant for New York International Airport's new "Terminal City" will have on display the world's largest installation of Carrier automatic pushbutton absorption refrigerating machines, nine of which will be lined up side by side in this glass-walled building in the center of a 655-acre landscaped parking and service oval.

the absorbent solution, Fenn source use for heating will also said. Thus the same energy power the cooling equipment.



Horne's main store in Pittsburgh has 28 filter stations with banks ranging from 10 to 48 filters each. Pittsburgh Glasfloss Filters are used exclusively. The system was installed in 1937.

Chilled Water To Be Piped Underground

Housed in a modern utility power house centrally located to all airline stations, chilled water will be distributed through underground pipes in much the same manner as other services.

Pipelines will extend nearly half a mile to supply some of the structures in the oval area three-fourths the size of Central Park. The main chilled water mains from the central station will be two feet in diameter, the Carrier executive said.

The major building in the modern project using the chilled water supply for air conditioning is the International Arrivals building with two adjacent Airline Wing buildings.

Three stories tall at the highest point, it will stretch for a



Howard F. Burrell, Chief Engineer, reports that Pittsburgh Glasfloss Filters are easy to handle, soft and light weight; and that this Fiber Glass filter does not splinter or shred.

"We effected a direct unit saving of 13% by switching to Pittsburgh Glasfloss Air Filters"

—says Howard F. Burrell, Chief Engineer
JOSEPH HORNE CO., Pittsburgh, Pa.

"The filters we previously used in our store-wide air conditioning system would shred and stick to fingers and clothing when handled," reports Mr. Burrell. "They were not uniform in quality and their performance was erratic."

"We switched to Pittsburgh Glasfloss Filters in February, 1956. We found Glasfloss Filters much easier to handle. They are lighter in weight and safer, too; this Fiber Glass does not splinter or shred. What's more, Glasfloss lasts longer, making it possible for us to effect a 13% saving over filters previously used."

"From an engineering point of view, we consider Glasfloss the most practical, eco-

nomical and dependable filter possible to obtain for our system!"

Glasfloss Filters Will Give You Best Results, Too!

Pittsburgh Glasfloss Filters are made of fine, soft Fiber Glass, which provides greater dust-collecting areas without interfering with the air flow. They are moisture proof and fire resistant. Glasfloss Filters will give you top service from your air conditioning system, help you cut costs.

Contact your nearest Glasfloss Distributor or Pittsburgh Plate Glass Warehouse. Pittsburgh Plate Glass Company, Fiber Glass Division, One Gateway Center, Pittsburgh 22, Pennsylvania.

AIRO stands for

Speedy, dependable,
world-wide service.

Air Conditioning and
Refrigeration parts,
equipment, supplies.

Write for Wholesale
Catalog No. 56

AIRO SUPPLY CO.

2732 N. Ashland Ave., Chicago 14, Ill.

PITTSBURGH GLASFLOSS FILTERS ARE A PRODUCT OF THE FIBER GLASS DIVISION OF PITTSBURGH PLATE GLASS COMPANY
Sales Offices are located in the following cities: Charlotte, Chicago, Cincinnati, Cleveland, Detroit, Houston, Los Angeles, New York, Philadelphia and St. Louis



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

NEW

COMMERCIAL REFRIGERATION SECTION STARTS MARCH 25 IN AIR CONDITIONING AND REFRIGERATION NEWS

Commercial refrigeration design, financing, merchandising, and installation will be given special emphasis in the new once-a-month Commercial Refrigeration Section starting March 25, 1957.

The NEWS recognizes the renewed importance of the independent contractor-dealer, as commercial refrigeration forges ahead. He has amazing opportunities for profit as he establishes his own effectiveness in the distribution picture at an ever higher level.

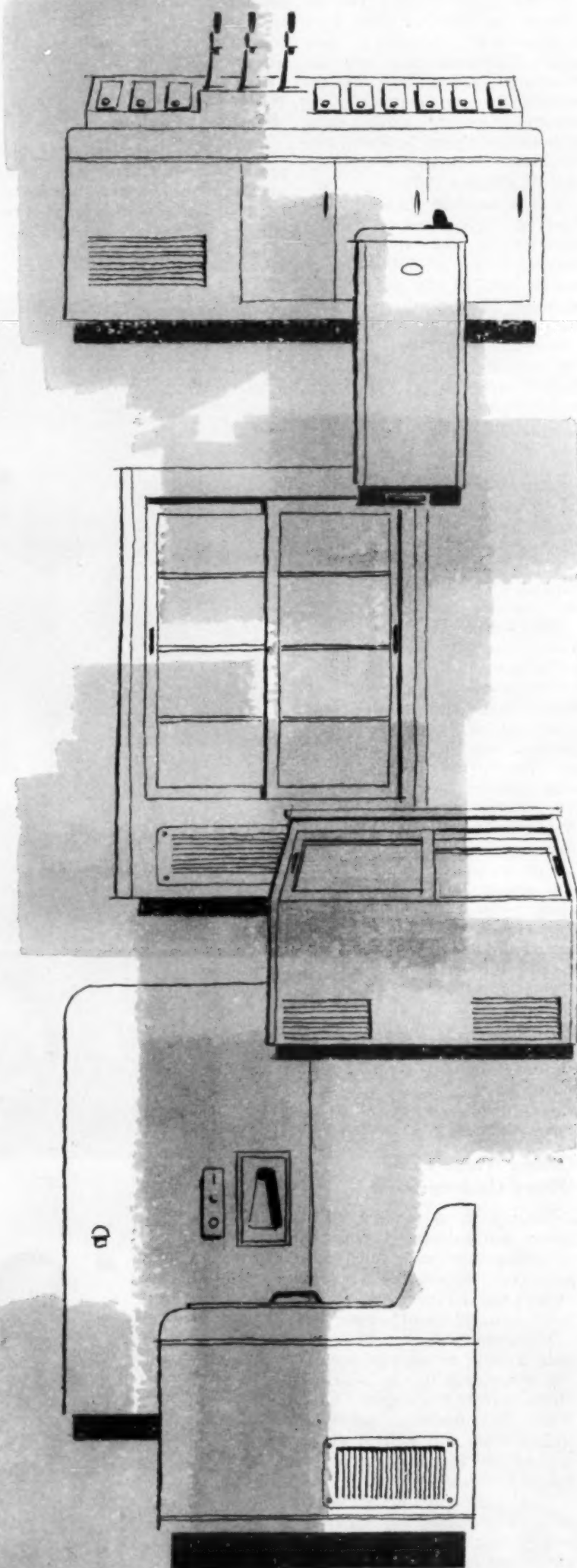
Manufacturers need his improving concepts of store layout, his better trained engineering and installation personnel, and his solid backing of installations with adequate dependable service.

So NEWS editors will provide a concentration of stimulating, dramatic news and feature articles in the new Section to help more dealers do the "big job."

In addition to this monthly section, all weekly issues will continue to carry timely news of the field.

Commercial refrigeration manufacturers are invited to take advantage of this new service with concentration of advertising to tie in dramatically with the Section.

ACT NOW . . . Plan your advertising to support and influence these important men at the "business end" of the distribution line—the contractor-dealers.



AIR CONDITIONING
& REFRIGERATION

The Newspaper of the Industry

NEWS

The newspaper that carries more advertising by far than any other publication in the field.



450 WEST FORT STREET
DETROIT 26, MICHIGAN

NEW YORK, 521 FIFTH AVE.,
MURRAY HILL 2-1928-9, ROBERT M. PRICE

CHICAGO, 134 S. LA SALLE ST.,
FRANKLIN 2-8093, AL SCHILDHAMMER

LOS ANGELES, 4710 CRENSHAW BLVD.,
AXMINSTER 2-9501, JUSTIN HANNON

DETROIT, 450 WEST FORT ST.,
WOODWARD 2-0924, J. B. SULLIVAN

BHC Symbol Bows At Builders Show

NEW YORK CITY—A distinctive symbol, established as the mark of identification for the Better Heating-Cooling Council, made its debut on display booths of Council members at the National Association of Home Builders Show held in Chicago.

"Representing quality heating and cooling, the symbol has been incorporated in a new 'BHC member' sign which was made available for use by council members at trade shows and exhibitions," it was pointed out.

The BHC member sign is expected to receive extensive use at the 13th International Heating & Air Conditioning Exhibition in February, as orders for the sign from member companies ran unusually high, the council reported.

Council's symbol, reproduced in four colors, consists of a casual brush drawing depicting a modern house, three silhouetted figures representing an American family, and the letters "BHC" in large, bold type. Within the sketch of the dwelling is a small rectangle—a heating-cooling plant—containing a red heart which is described below by the phrase "heating/cooling—heart of the house."

Eastbrook Center Buildings Will Be Air Conditioned

MONTGOMERY, Ala. — The buildings in the new \$2,400,000 Eastbrook Shopping Center, located in the Dalraida-Capitol Heights section, will be completely air conditioned, according to Smith and Cochran, managing agent for the center.

Cincinnati Groups Sponsor 'Check Your Chimney Week'

CINCINNATI—Necessity for "constant vigilance" against carbon monoxide poisoning danger was emphasized here recently under joint sponsorship of the Greater Cincinnati Safety Council, City of Cincinnati, and Cincinnati Gas & Electric Co.

"Check Your Chimney Week" was "an intensive" campaign to impress on the public the importance of checking chimneys to make certain they are clean and unobstructed.

Servicemen were urged to advise customers to follow "these four easy steps":

1. Pull vent pipe out of chimney and look inside the hole. Remove soot, mortar, broken bricks, or bird nests. Be sure chimney is clean.
2. Blow candle or tobacco smoke into the chimney to see if the smoke rises readily.
3. Examine and clean vent pipe. Make sure there are no breaks or holes. Remove and discard the damper.
4. Replace vent pipe so every part goes uphill. Be sure the vent pipe does not touch the back of the chimney.

Cincinnatians were cautioned

that, if the heater was not operating correctly after checking all these points, a serviceman should be called at once.

Des Moines Firm Changes Its Name

DES MOINES, Iowa — Green Colonial Furnace Co. recently changed its name to Green Colonial, Inc., Wright C. Percival, president, announced.

"Because of the addition of summer air conditioning and a farm equipment line to our business," he said, "the new name is more appropriate. And with the increased acceptance of summer cooling, volume of the company's production devoted to these units has greatly increased."

28 Million Dwellings Heat Automatically

MINNEAPOLIS—This winter more than 28 million homes or dwelling units have central heating. A report by Minneapolis-Honeywell indicates that in 18,600,000 of these homes the heating equipment is doing this automatically.

"The statistics indicate what a tremendous growth has taken place in this field in the last 10 years," the company said. "In 1946 there were only 7,135,000 automatically operated heating systems. Six years ago the figure was 10,435,000."

Worthington dealers... new sales building campaigns for '57

MAKE PROFITS FOR YOU!



The kind of air conditioning you need...
Complete air conditioning by **WORTHINGTON**

You get nation-wide attention when Worthington's high-impact advertising campaign kicks-off with this powerful spread in Life, March 25th. It continues with more hard-hitting ads in Life throughout the season. And each one carries your message to thousands of home and business air conditioning prospects.



You get additional local sales action with unique Worthington Climate Vans—traveling showrooms which will display and demonstrate Worthington furnace and air conditioning units in all major markets. Your customers in every field can see the equipment they want in Worthington Climate Vans. And they'll come to you to buy it!



LOOK IN AT
WALTON'S BOOTH
#434 AND SEE
NEW HUMIDIFYING
UNITS FOR ANY DUCT
CIRCULATING SYSTEM

Walton
Laboratories, Inc.
Irvington 11, N. J.

CASH IN ON THIS OUTSTANDING PACKAGED PROGRAM!

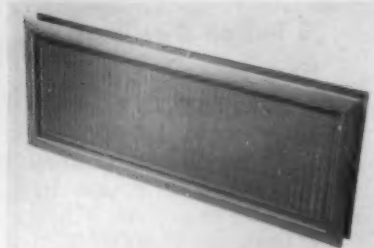
Write us—or call your Worthington District Representative for details today. Find out, too, about the many sales aids designed by Worthington to help you sell: billboards... co-op ad mats... displays... direct mail... TV and radio commercials... and more! Worthington Corporation, Dept. AC, Harrison, New Jersey.

WORTHINGTON



A7.30

What's New



Door Grille Features Telescoping Frame

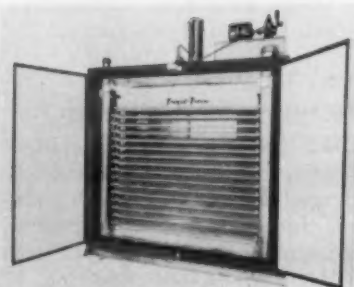
—KEY NO. G-230—

ROCKFORD, Ill.—A new door grille, "Uni-Flo" model ED, is now available from Barber-Colman Co. here.

It features a telescoping frame which provides a 1-in. flange for both sides of the door. It can be used in doors ranging from 1½ in. to 2 in. thick.

Two cores are available. One, vision-proof from any angle, has a free area of 81.5%—the other has a free area of 86.6%. Special baked enamel finishes are available to match any color.

Refrigerator Corp. Expands Freezer Line



—KEY NO. G-231—

ELIZABETH, N. J.—Refrigeration Corp. of America recently expanded its freezer line to include models and sizes with capacity of from 50 to 50,000 lbs. an hour per freezer, it was announced.

"Frigid-Freeze" plate freezer, formerly a custom built product, is now being mass produced, the firm said. One feature utilizes a new liquid level expansion valve to achieve full flooding of plates. All freezers have smooth, stainless steel interiors with corners accessible for cleaning.

In addition, the firm has inaugu-

rated a Technical Service Div. to assist frozen food packers in planning layouts, it was explained. Through an associated company, Grayson Equipment Co., Inc., the firm is now able to offer "Turn Key" plan to new packers of frozen food products.

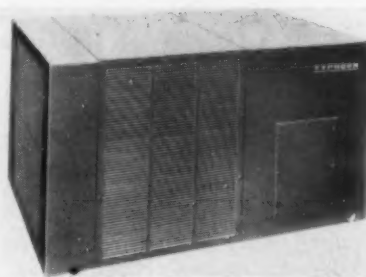
Sprayable Plastisol Coating Is Pore-Free

—KEY NO. G-232—

RAHWAY, N. J.—Film thicknesses of 50 to 60 mils per spray coat can be obtained with a newly formulated sprayable plastisol made by Metal & Thermit Corp. here, it was announced.

"Unichrome Super 5,300" is claimed to make possible gun application of the full solids content of vinyl plastisol without a diluent, the company reported. The pore-free coating can be successfully applied in one layer which gives sheet protection to tanks, ducts, and other equipment, it was noted.

Offers Self-Contained Air-Cooled Units



—KEY NO. G-233—

BROOKLYN—A new, self-contained air-cooled air conditioning unit was announced here recently by Typhoon Air Conditioning Co., Div. of Hupp Corp.

Designed for economical installation in small stores and offices, the unit can be used with or without

ductwork and located in basement, crawl space, through-the-wall, or window or transom, the company said.

Measuring 43½ by 29½ by 23¾ in., the "Economair" operates on a single-phase, 60-cycle current at 230 v.

Two models having the same outer dimensions are available, the company indicated. The RAS-21, with 2-hp. compressor, 24,000 B.t.u. capacity, weighs 320 lbs., while the TAS-31, with two 1¼-hp. compressors, 36,000 B.t.u. capacity weighs 450 lbs.

A centrifugal blower is claimed to reduce static resistance problems such as fan motor overloading. An optional plenum with adjustable louvers is available.

Mitchell Introduces '57 Auto Conditioner

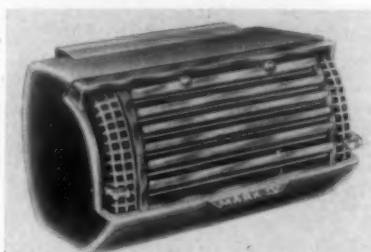
—KEY NO. G-234—

DALLAS—John E. Mitchell Co. here recently introduced its new "Mark IV" auto air conditioner which is claimed to give peak cooling capacity at slow speeds.

The dash model has fiber glass case with chrome air direction louvers. Delivered in neutral gray, the case may be quickly removed without disturbing the evaporator and sprayed to color-match the car, the firm noted.

Also produced in a trunk model, Mark IV has rotatable plastic snorkels for air direction. Both units are packaged for 6 and 12-v. systems.

Maximum automatic fingertip



control is provided by the "Robotrol" system, the company explained. It regulates temperatures by modulating refrigerant flow. There is no need for snap-on and off clutch or solenoid. The condenser is 1-in. thick, the company added.

Pushbutton Propane Torch Has Jet Blast Flame

—KEY NO. G-235—

ROCHESTER, N. Y.—Otto Bernz Co. here recently announced a "giant" pushbutton propane torch with jet blast flame.

Using a self-sealing, propane gas-filled cylinder, the new torch has a burner shield 3 in. long and 1 in. in diameter. It is said to produce a larger flame which maintains consistent maximum temperature of 2,010-2,050° F.

Operating on the pushbutton principle, the flame of the trigger torch is ignited by a steady-burning pilot light.



Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

Products Advertised

(list name, page, and issue date)

.....
.....
.....
.....

What's New or Current Literature Available

Key No.	Key No.
Key No.	Key No.
Key No.	Key No.
Key No.	Key No.
Key No.	Key No.

Name Title
(Please Print)

Company

Street

City..... Zone..... State.....

Type of Business

MAIL THIS FORM TO

AIR CONDITIONING & REFRIGERATION NEWS
Readers Service Dept.

450 W. FORT ST.

DETROIT 26, MICHIGAN

Big Eyes



will be on the



MARLEY

BOOTH number 815
at the ASH&AE show

Here you will see Marley's eye-opening 1957 line of water cooling towers for air conditioning and refrigeration. Plan now to visit "cooling tower headquarters" where you'll see the world's most complete line that has established the "hi-fi" records for cooling tower performance!

The Marley Company
Kansas City, Mo.

For more information about products advertised on this page use Information Center, page 22.

Seen at the Builder's Show



KEY NO. G-236

DESIGNED TO MEET FAMILY requirements for both refrigerator and freezer is this Manitowoc built-in two-zone 10-cu. ft. refrigerator and 12-cu. ft. freezer. C. T. Geisler (r.), credit manager for Manitowoc Equipment Works, describes features for D. C. Drummond of Dunkirk, N. Y.



KEY NO. G-237

"CHOCOLATE BETSY" a new coin-operated vending machine dispensing a special-formula milk shake was displayed at the Builders Show by Florence Stave Co. Jeanne Pollock does the honors.



KEY NO. G-238

SUB-ZERO FREEZER CO.'s first built-in freezer with replaceable door panels is shown to a booth visitor by Mike Sakellaris (l.), Sub-Zero representative in Iowa.



KEY NO. G-239

PUSHBUTTON OVEN that can be raised to suit the height of the housewife and then lowered to cabinet height is demonstrated by David McGuckin (r.) manager of Philco Corp.'s contract sales, to Mr. and Mrs. A. Dioguardi of Marleton, N. J.



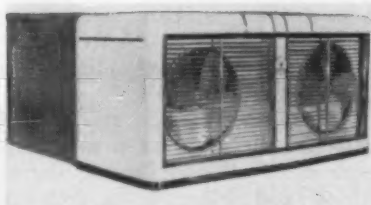
KEY NO. G-2310

MOUNTED IN ITS OWN free standing frame, this Preway, Inc. built-in refrigerator-freezer combination needs no special bracing or support. R. J. Sanderson (l.), Preway field sales manager, tells Rita Greer of Milwaukee.



KEY NO. G-2311

INTERIOR DECORATOR Shula Bass (l.) of Washington, D. C. inspects an under-counter freezer exhibited by Revco, Inc. William Pierson, Chicago district sales manager, tells her that a wood panel for the door is furnished in the field to match the kitchen cabinets.



Self-Contained Unit Needs No Ductwork

KEY NO. G-2312

MILWAUKEE—A new, compact, fully self-contained air conditioning unit that needs no interior ductwork or water connections was recently announced here by Aug. G. Barkow Mfg. Co.

Designed for large-space use in markets, restaurants, bars, offices, factories, and other facilities, the new unit can be used for air conditioning, ventilating, recirculating, or exhausting air.

Known as "Super-Five," of either 5 or 3-ton capacity, the unit is 61 by 24 by 50 in. Installed horizontally in a wall, 24 in. protrudes into a room and 22 in. out-

side. It can also be split with the condensing unit installed outdoors and the evaporator section suspended from the ceiling. No special plumbing is required, the company said. It can be used separately or as one of several for a variety of tonnage requirements.

Worthington To Market Rust Preventative

KEY NO. G-2313

HARRISON, N. J.—Worthington Corp. recently received exclusive rights from Quaker Chemical Co. to market the latter's "Ferri-cote 300" blend rust preventative in 1-qt. cans, it was announced.

It will be sold solely through Worthington distributors.

Made for indoor use only, the rust preventative is claimed to be effective in preventing formation of rust on pump installations during shutdown. It can be sprayed or painted on parts, machine tools, or any metal surface which might rust. Small parts can be dipped, the company explained.

Blind Spots Eliminated In Air-Cooled Unit

KEY NO. G-2314

TULSA, Okla.—Developed by F-5 Air Conditioning Corp. here recently was the "Fandaire," an air-cooled unit using sloped circular condensing coil to eliminate blind spots and permit more "efficient drainage" of the condensing refrigerant, it was announced.



Fandaire is available in 3, 5, 7½, and 10-ton units. Housing, air-cooled condenser, compressor, receiver, fan, fan motor, and condensing unit control box comprise the air conditioner components, it was pointed out.

Compressor is three-phase, 60 cycle, 220-208 v., or 230 v., 60 cycle, single-phase. F-5 corporation also offers the Fandaire condenser only in sizes 2 to 30 tons.

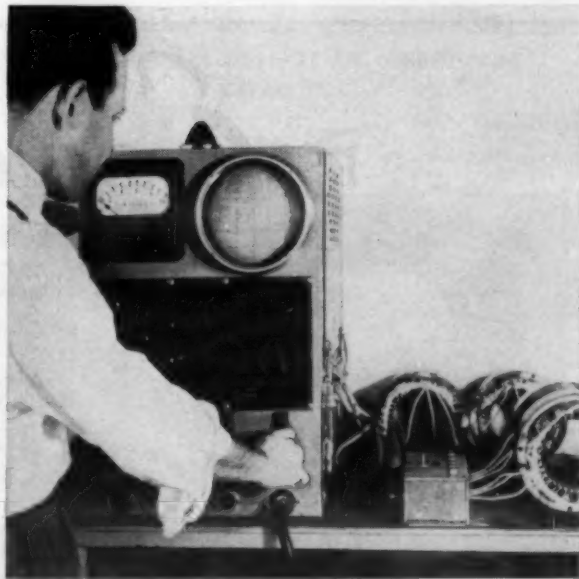


like the
electronic
gun
in a
TV picture tube



A.O. Smith
HERMETIC MOTORS
are quality-built to be

**SEALED
AND
FORGOTTEN**



A. O. Smith hermetic motor stators undergo surge comparison and dynamometer tests.

Just as the dependability of a modern TV picture tube is governed by the performance of a hermetically sealed electronic gun — so too, the dependability of an air conditioning compressor rests on the performance of its hermetically sealed motor.

A. O. Smith hermetic motors really can be sealed and forgotten. They're quality-built . . . dynamically-balanced for years of quiet, vibrationless service. Each motor is manufactured with particular attention to every detail . . . assembled and tested in controlled atmospheric conditions, ever-free of dust and foreign matter.

A. O. Smith hermetic motors are application-engineered to match your compressor design. They're available in single-phase, 1½ through 5 hp and polyphase, 1½ through 10 hp. Write for all the facts on A. O. Smith Hermetic motors.

Choose from a complete line of A. O. Smith quality motors —

SINGLE-PHASE, capacitor-start, induction-type motors from ½ through 5 hp. POLYPHASE, squirrel-cage, induction-type motors from ½ through 150 hp.

Through research . . . a better way

A.O. Smith
CORPORATION

ELECTRIC MOTOR DIVISION

Tipp City, Ohio
INTERNATIONAL DIVISION: MILWAUKEE 1, WISCONSIN

Preview

Heating, Air Conditioning Exposition In Chicago To Feature Many New Products

Items below describe what nine exhibitors will display in their booths at the 13th International Heating & Air Conditioning Exposition in Chicago Feb. 25 to March 1. These preview stories are in addition to those that appeared in the Feb. 4 issue.

Halstead & Mitchell

Halstead & Mitchell will show its new residential evaporators and matching remote air-cooled condensers in booth 1002.

Both horizontal air flow and vertical discharge evaporators are now in production. The horizontal unit is designed for insertion in ductwork on the discharge side of the furnace. The vertical discharge unit is installed in the plenum of a conventional furnace. Evaporators and centrifugal condensers are available in 2, 3, and 5-ton sizes.

These and standard H&M cooling towers, air-cooled condensers, water-cooled condensers, and finned surface will be on display.

Trane

Trane Co.'s display in its 137-ft. long booth will spotlight a "CenTraVac" automatic hermetic centrifugal refrigeration unit which spectators will be able to put into operation.

New products which will be highlighted include the "Torri-vent," a heavy-duty blower type unit heater; the "Multi-Zone Climate Changer," a large capacity fan-coil air handling unit; packaged year-round air conditioning units; high-pressure class 3 fans for air condi-

tioning system applications; unit ventilator shelving; bucket trap, float and thermostatic trap; utility fans for packaged ventilating units; and all-purpose type C room cabinet type heating units.

Other products Trane will show will include "Cold Generator," a reciprocating compressor; "Climate Changer," a fan-coil air handling unit; steam specialties including traps and valves; "Wall-Fin" pipe coil heating unit; a baseboard residential convector; "Unit Ventilator," the heating and ventilating schoolroom unit; steam, hot water, and gas-fired unit heater; heating and cooling coils.

Dole

Dole Refrigerating Co. plans to exhibit an "Ice-Cel LHS-12" ice storage unit in booth 233.

Ice-Cels vary in capacity from 18 to 46-ton hours for air conditioning, may be connected for multiple installation, and can be termed "a storage battery of refrigeration," the company said.

Clayton & Lambert

Clayton & Lambert Mfg. Co. will highlight its "Lamneck" line of prefabricated ductwork and fittings in booth 443.

New items designed to simplify remodeling problems for warm air installers will be featured.

Also on exhibit will be "Alumilux" and glass-lined water heaters and blow torches, the firm said.

Randall

Randall Graphite Bearings, Inc. will display its complete line of bronze sleeve bearing

pillow blocks and its cast bronze bushing line in booth 310. Featured will be a new split sleeve bearing pillow block.

All pillow block exhibit items will be chrome plated and consist of a wide array of variations and adaptations for the air conditioning industry.

Silvercraft

Silvercraft, Inc. will feature its new induced draft 10-ton cooling tower in booth N443.

"Power Package" units were designed to combine all mechanical parts into one compact unit, the company said. The 10-ton tower weighs 345 lbs., minimizes rigging and installation, it was stated.

A specially designed fan blade pulls a powerful draft through an inlet screen and over a corrugated, perforated wet deck cartridge.

Sta-Rite

Featured in booth N442 by Sta-Rite Products, Inc. will be type "A" and "AC" 1/4-5 hp. packaged air conditioning centrifugal pumps in addition to larger centrifugal units up to 40 hp.

The firm also makes pumps for commercial and industrial applications, including generative turbine pumps, vertical turbine pumps, and a recently introduced line of self-priming centrifugal pumps.

Reflectal

Highlighting a graphic display of "How Old Sol Can Be Taken Out of the Air Conditioning Picture," Reflectal Corp.'s "KoolShade" representatives will present a KoolShade calculator to every booth 229 visitor.

Made of heavy pasteboard, with sliding insert, the rectangular calculator provides data on sun position, solar heat transmission, through glass, and shadow angle.

Chicago Blower

Chicago Blower Corp.'s complete line of industrial ventilating and exhaust equipment will be on display in booths 602 and 703.

Included in the exhibit will be models of the firm's axial air-foil, "MD," centrifugal, and spid induced draft fans, roof ventilators, steel plate exhausters, turbo pressure blowers, and similar ventilating units.

Government Contracts

NAVY

Purchasing & Contracting Office, Navy Purchasing and Contracting Office, Navy Purchasing Office, 3rd Ave. and 29th St., Brooklyn, N. Y. COMPRESSORS complete Spec MIL-C-19113(QPL)—various—IFB N140-687-57B—Bid Opening 5 Mar 57.

District Public Works Office, Fifth Naval District, U. S. Naval Base, Norfolk, Va.

REHABILITATION OF HEATING AND WATER SYSTEMS at Naval Auxiliary Air Station, Edenton, N. C. Deposit of \$25 required for plans and specs—Job—IFB NBY 3729—Bid Opening 26 Feb 57.

District Public Works Office, Sixth Naval District, Naval Base, Charleston, S. C.

AIR CONDITIONING for second deck of north lean-to of fleet maintenance hangar, Bldg. 936, Naval Air Station, Key West, Fla.—Job—IFB 7864/56—Bid Opening 19 Mar 57.

AIR FORCE

Purchasing and Contracting Office, Keesler Air Force Base, Miss. INSTALL YEAR-ROUND CENTRAL STATION TYPE AIR CONDITIONING SYSTEM in 7 buildings. Headquarters, Technical Training Air Force, Gulfport, Miss.—Job—IFB 22-600-57-56—Bid Opening 1 Mar 57.

U. S. INFORMATION AGENCY

Procurements of \$1000 or more

United States Information Agency, Washington, D. C.

Attn: Contracting Officer.

WINDOW TYPE AIR CONDITIONERS—Lot—IFB 57-230(3)—Bid Opening 2-19-57.

SYNOPSIS of PROPOSED SALES of SURPLUS PROPERTY

Portsmouth Naval Shipyard, Portsmouth, N. H.

R. J. Moberg, CHPLK, USN, Disposal Supt.

Pumps and Air Conditioning Material—Total Estimated Acquisition Cost \$21,486—Invitation No. B-43-57-102—Bid Opening 27 Feb 57—Sealed bid, location above—Property located and may be inspected, address above.

CONTRACTS AWARDED THROUGH FEB. 12, 1957

Officer in Charge of Construction, District Public Works Office,

5th Naval Dist., Norfolk 11, Va.

Air Conditioning, Bldg. C-9 and CEP-61, Naval Base, Norfolk, Va. (IFB NBY-7648)—Contract—\$29,887—B&P Electric Co., Inc., 530 W. 25th St., Norfolk, Va.

Quartermaster Purchasing Agency, Columbus

General Depot, U. S. Army, Columbus 15, Ohio.

Dispenser, Drinking Water, IFB QM 33-031-57-285 (DA 33-031-QM-19756)—243

ea—\$41,609—Sunroc Corp., Glen Riddle, Pa.

Corps of Engineers, Office of the District Engineer,

New England Div., 150 Causeway St., Boston 15, Mass.

Design of Heat Distribution System for Otis Air Force Base, Falmouth, Mass. (DA-19-016-ENG-5054)—Job—\$34,000—J. O. Ross Engineering Corp., 444 Madison Ave., New York, N. Y.

**preferred
in CHICAGO**

by **BUSINESSMEN,
EXECUTIVES,
FAMILIES**

During certain convention periods, all available Chicago hotel rooms are frequently taken.

You can be assured of comfortable accommodations in the heart of the Loop, anytime, by writing for your FREE "Preferred Guest Card" from the Hotel Hamilton, today. The Hamilton—preferred by the family, and business executives for downtown convenience and courteous hospitality at sensible rates—guarantees (with advance notice) reservations anytime of the year to you, the preferred guest. Ask for your "Preferred Guest Card," today... at no obligation.

THE LITTLE SQUARE

Chicago's Newest restaurant and lounge

THE NEW HAMILTON HOTEL
"Preferred by guests in CHICAGO"
20 SOUTH DEARBORN

**Will Buy
1956 Room Air
Conditioning Units
in
Original Crates
Will Pay Cash**

Contact

**REFRIGERATING & POWER
SPECIALTIES CO.**

**380 BRANNAN STREET
SAN FRANCISCO 7, CALIF.**



A TYPICAL CONFIGURATION—
EFFICIENT, COMPACT DESIGN

Send for catalog
TT-652
TODAY
or call
TERHUNE 5-2808

EDWARDS ENGINEERING CORP.
100 ALEXANDER AVENUE • POMPTON PLAINS, NEW JERSEY

Edwards
CO-AXIAL CONDENSERS

The NEWEST design in water-cooled refrigerant condensers. Used by major equipment manufacturers because of these—

SELLING ADVANTAGES:

- Use 35% less water
- Cost reduced 30 to 40%
- Stock sizes: 1/2 to 7 1/2 tons
- No internal joints
- Easy installation
- Many compact shapes

Oil Fired Cooler -- National Radiator Announces Plans for Engineering Center

(Concluded from Page 1)

companies are affiliates of Standard Oil Co. (New Jersey).

The cooling cycle of the new "Sun Valley" air conditioner is of the Servel heat-actuated absorption type, which provides refrigeration without moving parts. With a delivered capacity of 96,000 B.t.u. per hour, it uses about 1/2 gal. of heating oil per hour to produce the cooling effect of 3 tons of refrigeration (standard ASRE rating), according to the announcement.

When the equipment is on heating cycle, the burner requires about 3/10 gal. of oil per hour for a delivered heating capacity of 96,000 B.t.u. per hour.

The important contribution of Gilbert & Barker Mfg. Co. was in developing an oil burner flexible enough to meet both the low requirements of the cooling cycle and the higher requirements of the heating cycle, it was pointed out. Changing the burner input from cooling to heating is done with the flip of a switch.

Esso Research & Engineering Co. has conducted extensive laboratory and field tests for the past two years. Experimental units have been installed in the homes of Esso employees in Louisiana, New Jersey, and Massachusetts, and in the homes of Servel employees in Evansville.

The experimental units have been under test long enough to prove their successful operation on both cooling and heating cycles, Servel said, adding:

"The oil-fired Sun Valley model is based on Servel's 20 years of experience in the field of absorption-type air conditioning. Like its gas-operated Sun Valley counterpart, the new oil-fired model will be shipped in a single crate, can be prepared for installation in less than one hour, and will require only 10.4 sq. ft. of floor space."

"The basic advantage of using one fuel for cooling as well as heating," DeFino said, "makes this new air conditioner of special interest to homeowners—plus the fact that the equipment to do this job of both heating and cooling with one fuel requires only one more control than would be used in a conventional forced-air oil furnace. All controls are factory installed, and this fact simplifies the installation of the equipment in the user's home."

Production of the new oil-fired Servel air conditioner will start in March, and the first production models will be ready for distribution before summer.

Sioux Falls Firms Announce Merger

SIOUX FALLS, S. D.—Merger of Queen City Heating & Ventilating Co. and Automatic Heating & Air Conditioning Co. was recently announced here.

These General Electric and Frigidaire dealers combined their heating, refrigeration, and air conditioning equipment sales and service into Queen City Heating and Air Conditioning Co., Inc.

William B. Thomas, Fred J. Huhn, and Gordon Gulbranson opened the new firm at 100 S. Indiana Ave. here.

Lewyt Production --

(Concluded from Page 1)

find a satisfactory local source," he said.

Therefore, the firm has moved out some space-occupying inventory and material and placed it in a public warehouse in order to setup a production line. It will begin functioning the first week of May.

Lewyt stated production would be continued in this plant through this year. For 1958, he hopes to have a new plant in the area.

Jerome Strauss, vice president-contract sales, will take over air conditioner sales responsibilities. He replaces Irving Bottner, who left the firm about two months ago. Eight salesmen who handle contract sales, will add air conditioners. Most selling "will now be on a direct basis."

Atomic Heating Plants Prediction --

(Concluded from Page 1)

plants at the start of Crane Co.'s first 1957 commercial heating school at Evanston.

He told a class of 22 Crane salesmen from across the nation that while central district atomic heating plants may be here in the next 10 to 15 years, the chances of developing individual nuclear heating plants for each home now seem technically and economically unsound.

"Such a plant would have to generate about 25 kilowatts," said James, "and at a cost in excess of \$5,000, it would just be too expensive for the homeowner."

Turning to current heating markets, James discussed the nation's schools. "The heating industry," he declared, "has been a little modest about telling PTA's and school boards

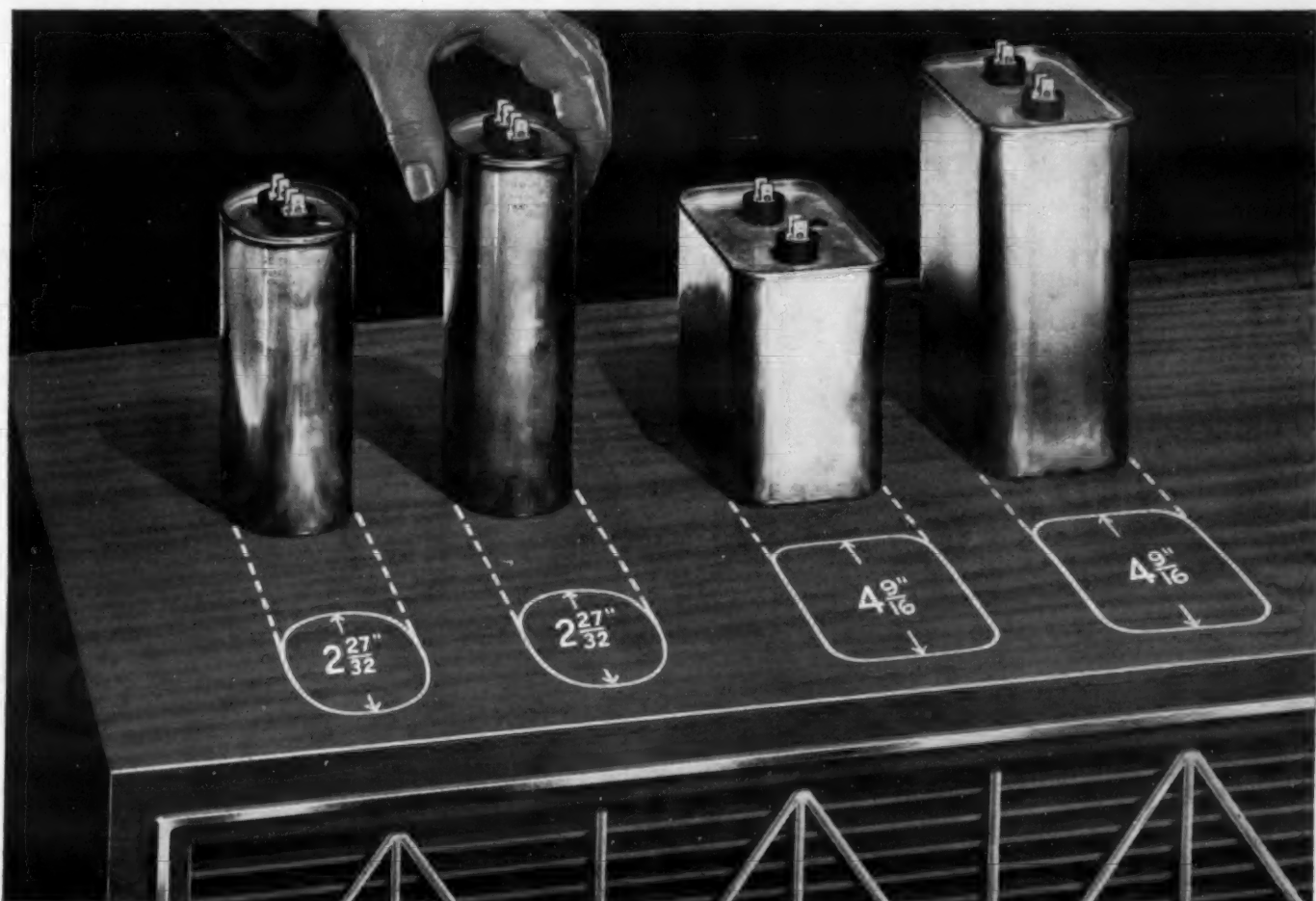
how important good heating and ventilating is to schools."

He pointed out that current heating equipment can give a quarter-degree-per-foot temperature gradient in schools, eliminating—in his words—"the cold feet and hot heads in the classroom."

The ASHAE president emphasized that the heating industry should be selling comfort, convenience, cleanliness, safety, health, and economy—rather than the technical points of heating equipment to its customers.

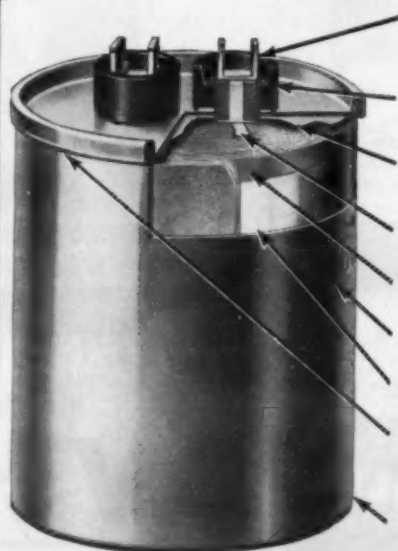
LOOKING FOR A NEW JOB?

Use the NEWS' classified advertising columns for fast, inexpensive results.



New G-E capacitors for air conditioners give you more μf in the same base size

10 REASONS FOR USING G-E AIR CONDITIONING CAPACITORS



1. QUICK-CONNECT TERMINALS, single or double-blade type as well as fork type, are available.
2. PHENOLIC CUPS with silicone bushings increase creepage distance.
3. BROAD UNDERCOVER INSULATION increases internal electrical creep distance.
4. AUTOMATIC TAP INSERTION assures correct positioning.
5. LOW-LOSS KRAFT PAPER assures long life, high performance.
6. AUTOMATIC FACTORY TESTING assures reliability of rating.
7. ALUMINUM FOIL of high purity assures uniform quality.
8. DOUBLE ROLL SEAM assures leak-proof cases even under severe operating conditions.
9. DRAWN SEAMLESS CASE eliminates possibility of seam leaks.
10. PYRANOL LIQUID IMPREGNANT makes possible minimum size, highest quality capacitor for a given rating.

PROBLEMS OF HIGHER POWER FACTOR correction for new room air conditioners are minimized with newly designed, higher microfarad (μf) Pyranol® capacitors now produced by General Electric.

HIGHER CAPACITOR RATINGS have been achieved with minimum increase in capacitor size and with no increase in base dimensions. Thus valuable space is saved and installation of higher rated capacitors can often be made without expensive changes in existing air conditioner design and layout.

PROPER APPLICATION of General Electric capacitors will assist you in improving power factor of all presently manufactured air conditioners, including the new 2-ton sizes. Your G-E Sales Engineer has the training and experience to assure that you get the capacitor you need. He can solve your special problems concerning power factor and optimum capacitor space utilization.

DEVELOPMENT OF THESE NEW CAPACITORS is further evidence of General Electric's continuing progress in anticipating and meeting the expanding needs of the air conditioning industry. Whatever your requirements, you can look to General Electric for the high quality capacitors you want—shipped when and where you need them.

*Trademark of General Electric Co.

442-33

Progress Is Our Most Important Product

GENERAL ELECTRIC

Hermetic Compressor Design, Development (3)

Packaged Air Conditioning Growth Broadens Compressor Range; Expert Explains Factors Involved In Need For Larger Sizes

Accelerated growth of packaged air conditioning, particularly in the residential field, during recent years has been an important factor in broadening the range of hermetic compressors. Bigger and bigger sizes are being designed and manufactured.

Why this is happening is outlined in this article by Henri Soumerai of Worthington Corp., who traces the development of the hermetic or "seal-less" compressor and goes on to explain numerous design and application factors involved.

This is the third and final instalment.

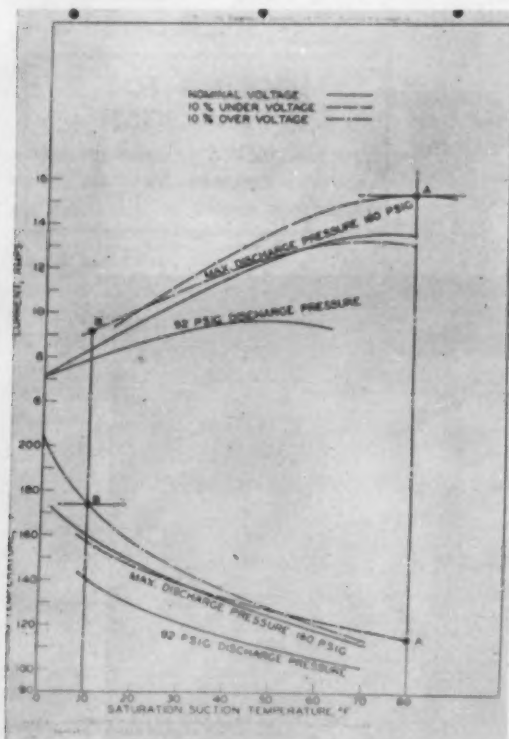


FIG. 12—These curves illustrate effect of saturation suction temperature and discharge pressure on winding temperatures and line current of 2-hp. single-phase, 60-cycle, 230-v. hermetic at 90° F. suction.

By Henri Soumerai, Worthington Corp.

MATERIALS

Generally the same types of materials are used as on open-type compressors. Particular care is taken in the selection of organic materials such as oil and motor insulation to make sure that they do not break down in the refrigerant ambient at extreme operating temperatures. The insulation and varnishes used on the wire of the motor must not be affected chemically as well as physically

by the refrigerant and oil mixture in both liquid and vapor form.

A high degree of cleanliness at assembly, proper evacuation as well as dehydration procedures will prevent harmful reaction in the complete refrigerant system as long as safe oil, refrigerant, and winding temperatures are not exceeded.

Physical stability is particularly important in "Freon-22" systems. This refrigerant has a

very strong tendency, particularly in its liquid phase, to soften some types of wire enamels which were used successfully in "Freon-12" for a number of years. A greater percentage of motor failures were experienced in "Freon-22" than "Freon-12" due to greater mechanical stresses on the wires of the stator and the softening of the wire enamel.

This problem has been remedied in the past few years by limiting the movement of the wires through improved motor design and varnishing methods and by the introduction of new insulating materials or better heat treatment of the Formvar wires.

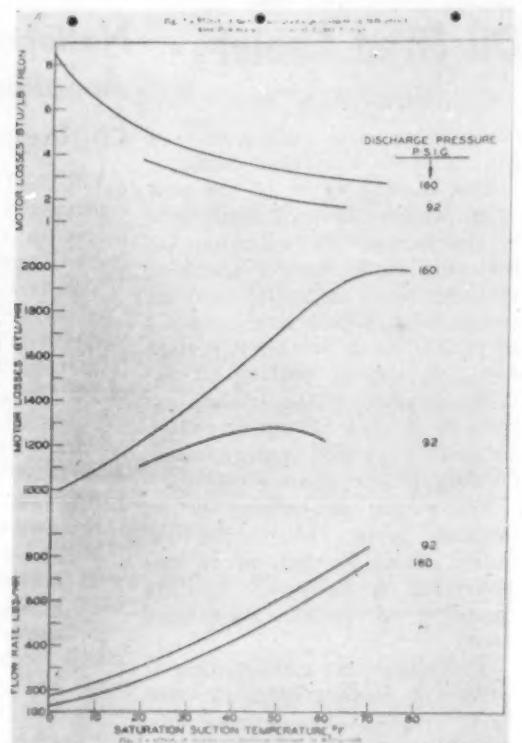
APPLICATION AND PROTECTION

Gas-cooled hermetic motors behave in a very unorthodox manner under varying load conditions. Large hermetic motors run cooler under high loads than under light loads, provided they do not operate too close to their breakdown torque. This point is illustrated in Fig. 12, which shows the effect of saturation suction temperature and discharge pressures on winding temperatures and line current in the case of a 2-ton "F-12" hermetic compressor designed for water-cooled condenser applications.

Note that at the maximum head pressure the current reaches, at nominal voltage, a maximum value of 13.5 amp. with a winding temperature of 118° F. at a saturation suction temperature of over 70° F. At an evaporating temperature of 0° F. and same head pressure, the unit draws only 7.1 amp. but the motor winding reaches a temperature of 178° F.!

The curves plotted on Fig. 13 show qualitatively why a gas-

FIG. 13—These curves show why a gas-cooled motor can run safely at extreme loads but overheat at low power input.



cooled motor can run safely at extreme loads and overheat at low power input. At 160 p.s.i.g. discharge pressure the motor losses drop only from 2,000 down to 1,000 B.t.u. per hour when the saturation suction temperature is lowered from 75° F. to 0° F., whereas the refrigerant flow drops from 830 to 120 lbs. per hr. and the motor losses per lbs. of refrigerant circulated increase from 2.6 to 8.5.

Because of the lower film heat transfer coefficient between motor winding and gas at lower mass velocities and the greater temperature rise of the return gas as it picks up the motor losses, the average winding temperature stabilizes at a higher temperature level in spite of the fact that total motor losses are smaller at the lower suction pressures.

Refrigerant and entrained oil discharge temperatures as well as the temperature of the main

body of oil in the crankcase follow a similar pattern as the motor winding temperature. In some applications safe gas and oil temperatures may be the limiting factor rather than motor insulation temperature.

Obviously, a conventional current limit protector will not prevent overheating at low loads. Remote type current overload elements either of the thermal or magnetic type are used primarily to protect the unit under stalled conditions.

A low pressure cutout is specified on air conditioner applications to eliminate the possibility of motor burn-out under abnormally low suction pressures which may be caused by a low refrigerant charge, restricted flow of refrigerant, dirty air filters, etc. We usually limit the minimum saturation suction temperatures to about 10° to 20° F. for air conditioning applications.

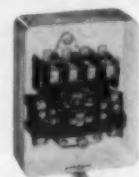
(Concluded on next page)

QUALITY MOTOR CONTROLS

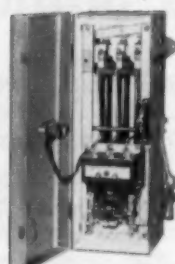
Allen-Bradley QUALITY . . . in design and workmanship . . . guarantees A-B starters will give millions of trouble free operations. Their silver alloy contacts eliminate contact maintenance, and two thermal overload relays prevent motor burnouts. Write for the Allen-Bradley Handy Catalog.



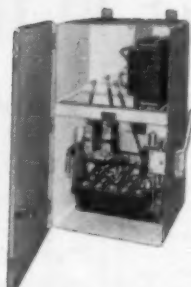
The Sign of
QUALITY
MOTOR CONTROL



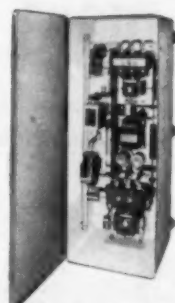
Bulletin 709
across-the-line
solenoid starter



Bulletin 640
manual resistance-
type starter



Bulletin 646
manual autotrans-
former starter



Bulletin 742
automatic resistance
starter

and ACCESSORIES

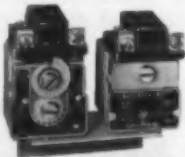
Allen-Bradley offers a complete line of QUALITY control accessories for air-conditioning and refrigeration systems.



Bulletin 837 tem-
perature control



Bulletin 836 pres-
sure switch



High and low
pressure cutout



Bulletin 849 pneu-
matic timer

Allen-Bradley Co.
1313 S. First St., Milwaukee 4, Wis.
In Canada—
Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY
SOLENOID MOTOR CONTROL
QUALITY



**NEW WATERLESS
CENTRAL COOLING**

WILLIAMSON Waterless Wethermatic AirRefrigeration units can be added quickly and easily to any residential or store forced air heating system. Choose from plenum, duct, counterflow, suspended horizontal or console types for efficient low cost operation.

- No water needed
- No sewer or water connections
- No costly maintenance
- Pre-wired for easy installation
- 2, 3, 4, 5, and 7½ ton models
- Full tonnage provided

Plenum type illustrated may be installed above or below furnace.

Write for complete information today

WILLIAMSON
WETHERMATIC
AirRefrigeration

THE WILLIAMSON CO., 3320-E2 Madison Rd., Cincinnati 9, Ohio

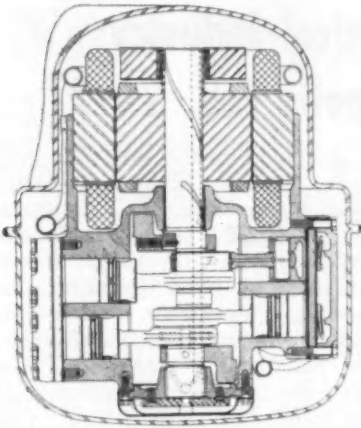


FIG. 14—This shows a 5-ton welded hermetic Tecumseh compressor.

Hermetics --

(Concluded from preceding page)

In order to take full advantage of gas cooling, hermetic motors are allowed to operate at high overloads. The ultimate trip currents are appreciably higher than on open-type motors of equivalent frame size and lock rotor current. This results in an abnormally low ratio of lock rotor to ultimate trip current, i.e., abnormally long trip time under lock rotor conditions.

Manufacturers of electric motor controls have met this problem by developing fast acting overload elements specially designed for the air conditioning industry.

Basically, gas-cooled hermetic compressors can be protected satisfactorily by:

- (1) Use of quick trip elements to protect under stalled conditions.
- (2) Low pressure cutout or equivalent thermal device to prevent operation at abnormal winding, discharge, and oil temperatures.
- (3) Manual resetting of remote overload elements and pressure cut out to prevent overheating, capacitor blow out, etc., under short cycling conditions.

DESIGN TRENDS

Trends in hermetic compressor design will be largely determined by the need of the residential market, since this segment of the package air conditioner industry offers the greatest potential growth. Larger production volumes and stiffer competition should bring about further reductions in initial

cost without sacrificing performance and durability.

With the growing demand for package air conditioners the industry will undoubtedly move gradually from today's highly mechanized individual machining operations towards partial or full factory automation. The benefits of automation from a cost and quality standpoint should be particularly noticeable in those areas of compressor manufacturing such as material handling, inspecting, processing, testing, and packaging which have not yet been as highly mechanized as the various machining operations.

From a design standpoint there are still many avenues to reduce cost, size, and weight.

Machining operation can be further reduced by making fuller use of stampings, powdered metals, shell mold or die castings, and other accurate forming methods.

With few exceptions, current

hermetic compressors operate at 1,750 r.p.m. with 4-pole motors. At the present time these "slower" 4-pole compressors are successfully competing with two-pole, 3,500 r.p.m. designs now on the market.

There is no doubt, however, that the two-pole design is potentially more compact, lighter, and less expensive. A considerable amount of engineering manhours and dollars are being spent by compressor motor and electric component manufacturers to develop lower cost, efficient, quiet, and durable two-pole hermetics.

Although the long service life and warranty offered on hermetic compressors have a tendency to delay radical departures from proven conventional designs, the 3,500 r.p.m. hermetics will be more popular.

The development of lubricating oils and motor insulations suitable for higher operating temperatures as well as a truly

inherent protector built in, or on, the motor winding will make it possible to further reduce the size of the compressor and extend its useful range.

A trend is already shaping up towards fully welded hermetics in sizes up to 7½ tons. Enclosing the motor-compressor frame and running gear in an inexpensive deep-drawn steel tank (Fig. 14) gives the compressor engineer greater freedom in design and selection of materials.

Except for the cylinder and head assemblies, the castings do not have to be pressure tight. The crankcase is reduced to a skeleton with thinner wall sections of cast iron or other materials such as die cast aluminum alloys. Lower first cost and weight reduction are the main reasons for this trend toward fully welded hermetics.

It should be noted that this reduction in initial cost is accomplished by sacrificing serviceability. Advocates of the

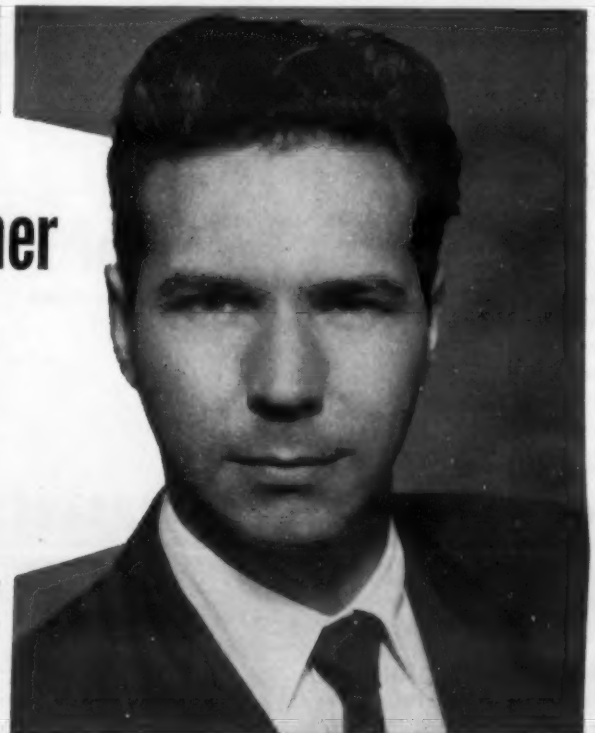
welded design point out, however, that the bulk of future residential units will be sold through outlets not equipped to service compressors, so that the feature of accessibility will lose in importance and in some cases may even be a liability.

New design features will be incorporated in hermetic compressor designs to keep up with the requirements of the industry. For instance, there is already a definite need for some form of capacity control in combined heat pump and cooling systems. Two-stage operation may well be the solution to some air-to-air heat pump application problems.

No matter what the trends may be, we feel confident on the basis of the progress made in the last few years, that compressor manufacturers will meet the demand of the industry and help bring air conditioning into every house.

(To Be Reprinted)

Anco Condenser Cleaner Solves Problem for Charleston Dealer



MR. F. A. BAILEY, of F. A. Bailey & Sons, air conditioning engineers and contractors, Charleston, S. C., writes: "Lime and calcium deposits in water-cooled condensers and water piping are a big problem in our area. But the first time we cleaned a unit with ANCO Condenser Cleaner, we were convinced that this was the answer to the problem. We've been using it ever since with only the most satisfactory results. Thanks for introducing us to ANCO Condenser Cleaner."

Mr. Bailey's experience is typical of thousands of air conditioning servicemen who use ANCO products to keep customers happy. Once you have used ANCO formulas, you'll never use anything else. They're that much better—and cost less, too.

ANCO PRODUCTS for Plus Profits



ANCO CONDENSER CLEANER

Faster cleaning action is assured by power-packed wetting agents. ANCO Cleaner, dissolved in the sump while the system is in operation, removes scale and rust quickly. Harmless to metal surfaces because of highly effective inhibitors.



ANCO COOLING WATER TREATMENT

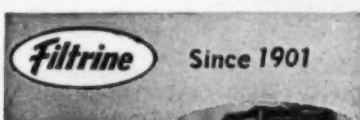
Prevents rust, corrosion and scale. Special container placed in condenser pan or tower basin allows contents gradually to dissolve into cooling water, keeping system operating at peak efficiency.



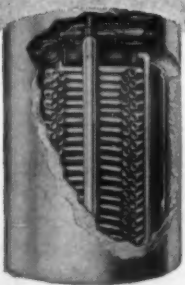
ANCO ALGAECIDE

Removes algae and slime from cooling towers and condenser tubes. ANCO Algaecide Briquettes added at intervals to the sump prevent algae and slime from forming.

SOLD BY WHOLESALERS OF AIR CONDITIONING AND REFRIGERATION SUPPLIES



**Tank
Type
WATER
COOLERS**



- ◆ Extra-large storage
- ◆ Safety from freeze-up
- ◆ Fast hourly recovery
- ◆ 20-year life construction

Capacities: 5 to 500 g.p.h.
Storage: 2 to 240 gals.

Water coolers for all uses factory-packaged with your condensing unit. Write for literature.

FILTRINE MFG. COMPANY

216 W. PROSPECT ST. • WALDWICK, N. J.



Anderson Chemical Company, INC.

BOX 1424 • MACON, GEORGIA

28 Mechanics Needed for Each \$Million Of Business, RACCA Labor Survey Indicates

City	Retail \$ Volume (In Millions)	% of Total Market	Mechanics		Trainees	
			Total	Service	Installation	Re-quired
New York	\$ 292.8	6.1	8,198	2,635	5,563	1,476
Dallas	216.0	4.5	6,048	1,944	4,104	1,089
Chicago	192.0	4.0	5,376	1,728	3,648	968
Houston	158.4	3.3	4,436	1,426	3,010	798
New Orleans	129.6	2.7	3,628	1,166	2,462	653
Jersey City	129.6	2.7	3,628	1,166	2,462	653
Philadelphia	124.8	2.6	3,494	1,123	2,371	629
Washington-Baltimore	120.0	2.5	3,360	1,080	2,280	605
Miami	115.2	2.4	3,226	1,037	2,189	581
Kansas City	110.4	2.3	3,092	994	2,098	557
Birmingham	91.2	1.9	2,554	821	1,733	460
Oklahoma City	86.4	1.8	2,420	778	1,642	436
Atlanta	76.8	1.6	2,150	691	1,459	387
Detroit	72.0	1.5	2,016	648	1,368	363
Los Angeles	72.0	1.5	2,016	648	1,368	363
Cleveland	57.6	1.2	1,612	518	1,094	290
St. Louis	52.8	1.1	1,478	475	1,003	266
Lubbock & Amarillo	52.8	1.1	1,478	475	1,003	266
Pittsburgh	52.8	1.1	1,478	475	1,003	266
Boston	48.0	1.0	1,344	432	912	242
Tulsa	48.0	1.0	1,344	432	912	242
Louisville	48.0	1.0	1,344	432	912	242
Cincinnati	48.0	1.0	1,344	432	912	242
Mineola, L. I.	43.2	0.9	1,210	389	821	218
Springfield	43.2	0.9	1,210	389	821	218
Indianapolis	43.2	0.9	1,210	389	821	218
Wichita	38.4	0.8	1,076	346	730	194
Memphis	38.4	0.8	1,076	346	730	194
Philadelphia-Camden	33.6	0.7	940	302	638	169
Wichita Falls	33.6	0.7	940	302	638	169
Akron	28.8	0.6	806	259	547	145
Omaha	28.8	0.6	806	259	547	145
Total above 32 markets	\$2,726.4	56.8	76,338	24,537	51,801	13,744
Balance of markets	\$2,073.6	43.2%				
Grand Total All Markets	\$4,800.0	100.0%				

CLEVELAND — For every million dollars in retail volume for installation and service of refrigeration and air conditioning equipment, 28 mechanics are needed, a labor survey conducted last fall by the Refrigeration and Air Conditioning Contractors Association indicates.

Of these 28 mechanics, 19 are required for installation and start up and nine are required for maintenance and service, according to Warren W. Farr, chairman of the RACCA labor committee.

At present rate of industry growth and loss of manpower, 18% more mechanics need to be trained each year, the survey suggests.

32 MAJOR MARKETS STUDIED

The survey was based on information gathered in 32 major markets in all parts of the country.

In those markets, it found that \$4,800,000,000 of commercial and industrial air conditioning and refrigeration equipment was installed in 1955. This does not include domestic or window air conditioners, domestic freezers, ductwork, or wiring, Farr said.

The survey shows the dollar volume in this equipment sold in each market, the percentage of the local volume to the overall total, the total number of mechanics employed in each market, those used for service and for installation, and the number of trainees required.

Purpose of the survey, according to Farr, was to determine the reason for and the correction of the universal shortage of mechanics in 1956. It is projected to prove the immediate need for graduate apprentices each year as based on a reasonable increase in sales and replacement of retired and deceased mechanics.

Copies of the survey have been supplied to local associations and member RACCA contractors as a guide in providing apprentice and journeyman training classes "so that our position in the industry be maintained," Farr said.

MECHANICS LOSS SET AT 6% YEARLY

Insofar as training requirements are concerned, the survey shows an estimated 6% of the trained mechanics lost to the industry each year through death, retirement, or changing to another line of work.

It has been determined, RACCA said, that in 1956 industry volume increased more than 12% over the previous year, and "some predictions state the increase will be closer to 20% in 1956."

Based on 12% sales increase each year, plus 6% manpower loss, a total of 18% of mechanics "must complete apprentice training each year" to keep abreast of industry needs, the report continued.

Above is a census of air conditioning and refrigeration mechanics based on the 1955 dollar volume in 32 major markets as revealed by the RACCA survey.

Upper Midwest Electrical Industry Convenes In Minneapolis Feb. 24-27

MINNEAPOLIS — One highlight of the Upper Midwest Electrical Industry Convention which opens in the Leamington hotel here, Sunday noon, Feb. 24 will be the Electric House Heating Forum Feb. 27, sponsored by the House Heating Section, National Electrical Manufacturers Association.

Twenty-six meetings with prominent speakers are listed in the program of this 20th annual meeting. Seven "All-Industry" gatherings have been set-up by the program committee, it was pointed out. One is a wiring codes forum on Monday night, Feb. 25.

Engaging more and more attention is the question "What About Electric House Heating in the Upper Midwest Area?" a spokesman said. NEMA's House Heating Equipment section will offer a "factual" presentation in the Minnesota Room of the hotel, Wednesday afternoon.

Included on the program, presided over by Stanley B. Aronson, Berko Mfg. Co., chairman of the NEMA section, will be a talk on "The Individual Room Heater" by Fred Keiser of Edwin L. Wiegand Co. France Anderson, industrial sales engineer of Northern States Power Co. will discuss heating commercial buildings by heat pump, with special reference to the installation at the Southdale Shopping Center.

William Novak of *Electrical Construction and Maintenance* will present factual data as to relative B.t.u. comparisons of electricity with combustible fuels. "Putting the Heat Pump to Work in the Upper Midwest" will be covered by Glydewell Burdick, manager of Rate and Valuation Dept., Wisconsin Light & Power Co. Burdick's observations will be based on the operation of a heat pump in his own home, it was explained.

Gene Hunter Forms Cold Storage Door Firm In Los Angeles

LOS ANGELES—Gene Hunter, veteran of many years in refrigeration and related fields, announces the formation of a new company, Cold Storage Door & Supplies, Inc., with offices in the Produce building here.

Hunter heads the new organization which supplies doors for coolers, and cold storage plants and warehouses. Prior to his present enterprise, Hunter was associated with Jamison Cold Storage Door Co. and Thermal Products Co.

He was field superintendent for the old Baker Ice Machine Co., and was a field engineer for Mills Novelty (now Mills Industries, Inc.). He also spent a period of time as refrigeration and drafting instructor in St. Louis.

Nelson Hardware Moves Into New Building

ROANOKE, Va. — Nelson Hardware Co., wholesale distributor, is moving into a new building of approximately 125,000 sq. ft. one-floor style on a three-acre site to house its offices and warehouse.

The building is located just east of the Norfolk & Western Railway East End shops on 11 St. and Rhodes Ave. N.E.

FTC Hearings - -

(Concluded from Page 1, Col. 3)

conditioning Contractors Association was responsible for getting the original complaint brought by the FTC. Both it and the National Commercial Refrigerator Sales Association have been active in gathering evidence of unfair competition through supplying and servicing of refrigeration equipment at little or no cost to the retailer.

Everything in door gaskets at your finger tips!

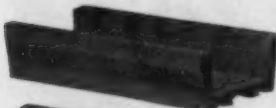
CATALOG C-300

Contains the latest in door gaskets for every refrigeration application. You'll want to keep this complete guide handy constantly.



Here are a few of its featured products:

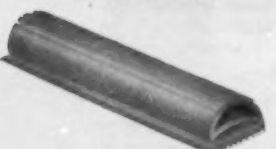
PLASTIC



JARENE-B . . . the ideal, tough, flexible vinyl plastic extruded material that can't crack, check or oxidize—highly grease resistant—long wearing—easily cleaned—any shape to exact specifications. Present applications include refrigerator, freezer, display case gaskets, beverage tubing.

V-1212 . . . same tough, flexible vinyl outer jacket as JARENE-B over resilient sponge rubber. Used on refrigerated display cases—weather-exposed freezer doors—refrigerated truck bodies—refrigerated and non-refrigerated railroad cars and others.

RUBBER



EXTRUDED RUBBER . . . finest quality for long, efficient service. Many different cross sections available from stock dies.

SPONGE RUBBER . . . molded with Neoprene outer jacket. Available in double cushion, single cushion and flat strips.

RUBBERIZED FABRIC . . . with either cotton or sponge rubber cushion; open or closed edge. Double-stitched flange for rugged wearing resistance.

Jarrow rubber or plastic gaskets can be custom-made to your exact specifications. Send us your blueprints or consult with our experienced engineers.

FOR YOUR FREE COPY OF CATALOG C-300, WRITE:



Your Sales are the payoff

AUTOMATIC KUBER

AND LA CROSSE GIVES YOU MORE OF EVERYTHING YOUR CUSTOMERS WANT MOST IN COMMERCIAL REFRIGERATION EQUIPMENT

SELF CONTAINED BOTTLE COOLER **DIRECT DRAW** **SELF CONTAINED BLUEBIRD**

DRAINBOARD **LA CROSSE** **THE LINE THAT'S PROFIT DESIGNED FOR YOU**

ICE CUBE MAKER 12 TRAY **PRE-COOLER**

LA CROSSE COOLER CO.

3000 LOSEY BLVD., SO. LA CROSSE, WISCONSIN

EXPORT OFFICE: 86 BROAD ST. NEW YORK CITY CABLE: EXIMPORT

Now Representing...

Wolverine Tube, Div. of Calumet & Hecla, Inc.—JOHN V. BETZ has been appointed sales representative in the New York area. He will concentrate selling activities primarily on wholesaler customers of the firm. He was formerly with Gar Supply Co. of Long Island. WILLIAM BOTHWELL has been named sales representative in Kentucky, southern Indiana, and surrounding area. He replaces JACK SHEEHAN who was recently promoted to wholesaler sales manager. He has been aluminum office representative in Wolverine's general sales offices.

Pennsylvania Salt Mfg. Co.—Ten new agents have been appointed to market "Isotron" refrigerators in the east and midwest. ALLEN B. HARVEY will represent the company in the northeast. He is former eastern sales manager of Eston Div., American Potash & Chemical Co. CARL STEWART will cover New York state and western Pennsylvania. NORMAN K. PORTER will serve the wholesale trade in Michigan and Ohio. The I. H. COHLER CO. of Chicago will serve the north central area. R. L. WILLIAMS has been named representative to serve wholesalers in the southwest. RUDY A. WOLFE and WALTER EVANS will market the product in Louisiana, Mississippi, Arkansas, and southern Texas including Houston and San Antonio. KEN WRIGHT has been named Florida representative. He was a field engineer with Alco Valve Co.

Federal Refrigerator Mfg. Co.—NELSON-KENT REFRIGERATION, INC. of San Francisco and San Mateo, Calif. has been appointed distributor for the bay area.

Mitchell Mfg. Co., Div. of Cory Corp.—JOS. M. ZAMOISKI CO., Washington, D. C., has been named distributor for room air conditioners in that area. The line was formerly handled by SIMON DISTRIBUTING CO. JOHN RIORDAN has been appointed district sales representative for the packaged air conditioner division. He will represent the firm in the five New York City boroughs and northern New Jersey. He has been associated with Carleton-Stuart Corp., distributor. GEORGE LU-

CAS has been named district sales representative for packaged air conditioners in the Texas-Oklahoma area. He formerly was a heating and air conditioning contractor in Miami, Fla.

Amara Refrigeration, Inc.—ARCO DISTRIBUTORS, INC., Lansing, Mich., has been appointed distributor in 33 counties in central and northern Michigan.

Gibson Refrigerator Co., Div. of Hupp Corp.—RHODE ISLAND DISTRIBUTING CO., Providence, has been appointed distributor of Gibson refrigerators, electric food freezers, and electric ranges in Rhode Island; Windham and New London counties in Connecticut; Dukes, Barnstable, and Bristol counties in Massachusetts. It will also cover the cities of Middleboro and Wareham in Plymouth county of the Bay State. LEON PATAT & CO., Charleston, S. C., has been named distributor for 19 South Carolina counties.

John E. Mitchell Co. (Dallas)—JOHNNIE AND MACK of Miami, Fla. has been named distributor for "Mark IV" auto air conditioners for that area.

Dryomatic Corp.—Appointment of DAYREL G. HOKE as exclusive representative for the firm in the New York metropolitan area has been announced. Prior to this appointment, Hoke was a sales engineer for J. F. Pritchard Co. and Bristol Co.

Norge Div., Borg-Warner Corp.—FRIDLEY BROTHERS, INC., St. Louis, has been appointed distributor for 91 counties in eastern Missouri and southwestern Illinois. NEYHART'S, INC., Williamsport, Pa., has been appointed distributor in north central Pennsylvania and south central New York.

Emerson-Quiet Kool Corp.—GAYNOR SALES AGENCY was named exclusive distributor sales representative for window and through-the-wall air conditioners in Fargo, N.D., Duluth, Minn., Minneapolis, Sioux Falls, S. D., Omaha, Neb., and Des Moines, Iowa territories. NEUHAUSER &

WROBEL SALES AGENCY was appointed distributor sales representative in the Kansas City, Wichita, Marinette, Milwaukee, Chicago, St. Louis, Louisville, Terre Haute, Indianapolis, Fort Wayne, South Bend, Cincinnati, Toledo, and Grand Rapids territories.

Admiral Corp.—DEALER APPLIANCES, INC., Raleigh, N. C., has been appointed distributor in a newly-created territory including 20 counties formerly serviced from Charlotte, N. C. and 18 handled from Norfolk, Va.

Sunroc Corp.—Appointment of FRED STEADMAN as representative to restaurant, hotel, and food service equipment suppliers in Ohio, West Virginia, Kentucky, Michigan, and Indiana has been announced. His offices will be in Dayton.

Carrier Corp.—MARCO SALES, INC. has been appointed distributor for the Unitary Equipment Div. in St. Louis. It will cover the metropolitan area, southern Illinois, and eastern Missouri. KENNETH A. ROFFMAN, president, and GIL-

BERT L. MARKS, secretary-treasurer of that firm, have operated HEMMINGHAUS, INC., specialist in electrical and air conditioning contracting, for the past 10 years. Marks will continue to direct Hemminghaus while Roffman will devote full time to Marco.

York Corp., subsidiary of Borg-Warner Corp.—THOBEN ELROD CO., Atlanta, has been appointed Georgia distributor for the complete line of York air conditioning, heating, and refrigeration equipment.

Perfection Industries, Div. of Hupp Corp.—ALLISON-ERWIN CO., Charlotte, N. C., has been appointed exclusive distributor for the complete Perfection appliance line in all of South Carolina and in North Carolina with the exception of 15 counties in the northeast section. The firm operates three major divisions—wholesale hardware, major appliances, and floor coverings. It recently announced plans for construction of a new \$1 million 200,000-sq. ft. building in Charlotte to house its main warehouse and general offices.

Join YORK'S All-Out Assault On Air Conditionings SECOND FRONT!

Take Command of the rich "multiple-space" market with the YORK Multiple-Profit Plan!



Exposition --

(Concluded from Page 1, Col. 2)

show visitors can be made through the week of Feb. 18, Stevens declared. Only persons with a legitimate interest in the industry, not the general public, will be admitted.

To make advance registration write to 13th International Heating & Air Conditioning Exposition, 480 Lexington Ave., New York 17, N. Y. Badges for admittance will be mailed to registrants.

Visitors, of course, will also be able to register at the door of the Amphitheatre during show hours.

On the floor of the Amphitheatre will be seen new 1957 models of commercial, residential, and industrial air conditioning and heating systems. Producers of component parts, special equipment, and raw and prefabricated materials will show their latest developments. Together they will make this the biggest show in the history of the event.

In conjunction with the exposition, ASHAE will stage its 63rd annual convention in the Conrad Hilton hotel, Feb. 25-28. Presentation of 13 technical papers and two symposiums fill the program.

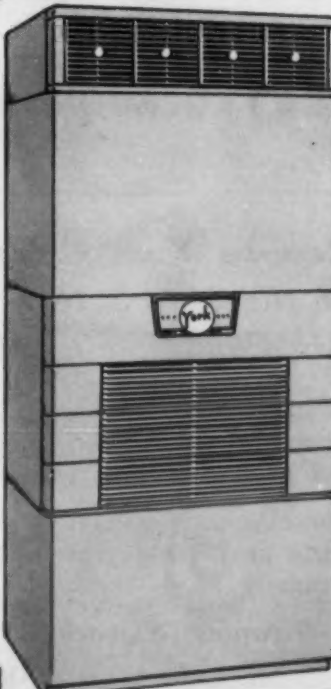
YOUR OBJECTIVE—To multiply sales and profits by capturing the largest part of the rich, profitable market for commercial air conditioners in your sector.

YOUR WEAPONS—A complete arsenal of 6 easy-to-install York Self-Contained Air Conditioners. Capacities from 3 to 22½ H.P.—with single, double and even triple compressors—make it easy to tailor multiple unit installations to large or small stores, office buildings, restaurants and hotels! No special foundations required. Each unit whisper quiet, backed by 5-Year Protection Plan on cooling circuits.

YOUR SUPPORT—A powerful barrage of national ads in Saturday Evening Post, Better Homes and Gardens, Newsweek, Business Week, Tap & Tavern, Hotel Management, American Restaurant and others. Plus all the tie-in sales-promotional material you need—including colorful sales literature, window banners, displays, demonstrators, everything!

YOUR REWARD—A rich new source of multiple sales, profits, prospects! And, as a York dealer you automatically become eligible to win an all-expense vacation to glamorous Varadero Beach, Cuba! Call your distributor today to put York's fabulous new Multiple-Profit Plan to work for you!

**Your FUTURE and FORTUNE
Now Lies With York**

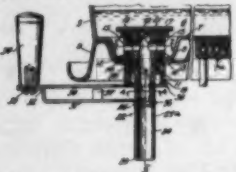


York Corporation, York, Pa.
Subsidiary of Borg-Warner

PATENTS

Week of October 9
(Concluded)

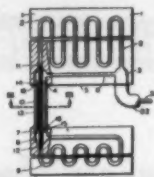
2,766,005. FAUCET VALVE FOR BEVERAGE DISPENSERS. Harry C. Fischer, Columbus, and Louis P. Benna, Gahanna, Ohio, assignors to The Ebeco Mfg. Co., Columbus, Ohio, a corporation of Ohio. Application May 16, 1952, Serial No. 288,145. 1 Claim. (Cl. 251-310.)



A faucet valve for beverage dispensers comprising a valve casing formed with an axially extending generally tapered valve chamber opening at each end of said casing and an inlet port extending through a wall of said casing and intersecting the chamber thereof; an elongated valve stem of generally annular cross-section extending axially through the chamber of said said casing and formed at one

end thereof with a relatively enlarged tapered head adapted to seat within the chamber of said casing and at its opposite end with a relatively reduced spout portion projecting beyond an end of said casing, said stem being rotatable within said casing and being removable axially from said casing through the larger end of the valve chamber thereof and being formed with an axially extending discharge passage opening at each end of said stem and a valve port extending through the enlarged head portion of said stem and intersecting said discharge passage, the valve port of said stem being arranged to register with the inlet port of said casing upon rotation of the stem to provide communication between the inlet port of said casing and the discharge passage of said stem; and a cap member of resiliently flexible material frictionally carried by said casing at the larger end of the valve chamber for closing an end of the discharge passage of said stem and for holding said stem against axial movement within the chamber of said casing, said cap member being removable from said casing to provide free access to the discharge passage of said stem and to permit free withdrawal of the latter from said casing.

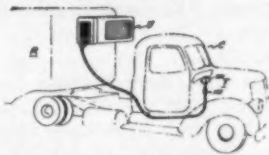
2,766,019. HEAT EXCHANGER ASSEMBLY. Richard P. Adams and Mason M. Handle, Alton, Ill., assignors to Olin Mathieson Chemical Corp., East Alton, Ill., a corporation of Virginia. Application March 23, 1955, Serial No. 496,213. 6 Claims. (Cl. 257-256.)



1. An assembly comprising a plurality of heat exchanger units, each unit having a passageway with an open end portion, a pipe having an end entering said open end portion of the passageway in each unit and substantially fluidtight means, connecting the pipe end and said passageway in each unit, a second pipe encasing said first pipe

and having an end adjacent each open end portion and substantially fluidtight means connecting said second passageways, and a second passageway opening into each open end portion.

2,766,439. COMBINATION REFRIGERATING CONTROL AND SIGNALING DEVICE. Dale C. Palm, Downey, Calif., assignor to Cab Control Co., Downey, Calif., a partnership. Application Sept. 16, 1953, Serial No. 389,500. 6 Claims. (Cl. 340-222.)



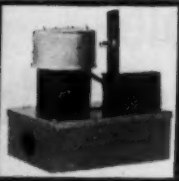
1. A combined indicator and control system for remote location on a vehicle for an internal combustion engine powered refrigeration system positioned on a trailer and having operatively connected an internal combustion engine, a starter-generator, a storage battery with one grounded terminal, an ignition system, a carburetor choke and relays for controlling the same, a starting circuit, a thermostat positioned in said trailer and a thermostat activated switch connected to said starter and ignition system, a solenoid for actuating a defroster valve for refrigerant and a solenoid for actuation of a defroster damper, said combined indicator and control comprising in combination, a control box mountable at a remote control position having a starter switch and a first indicator lamp, said indicator lamp being connected to the grounded terminal of said battery and to said starter switch, said starter switch being connected to the other terminal of said battery and to said starting circuit whereupon closing said starter switch completes circuits from said battery to said lamp and to said starter and ignition systems, said thermostat actuated switch completing on high temperature conditioning of the thermostat to conditions in said trailer, a circuit to said starter and ignition system whereby said starter-generator cranks said internal combustion engine and said first indicator lamp indicates a cranking condition on closing of said starter switch.

SEE IT AT YOUR WHOLESALE
FROM COAST TO COAST
NEWEST KESCO AUTOMATIC
20 FOOT LIFT
CONDENSATE PUMP
HALF INCH WATER STARTS PUMP

MONEY BACK
GUARANTEE

KESCO
PRODUCTS CORP.

Est. 1944
Springfield Gardens 13
New York



to
your
specs

**MOLDED
PLASTIC-RUBBER
PARTS**

Show us a print of the
molded part you need . . .
we'll show you how to pro-
duce it . . . accurately and
economically. Geauga's die
design ability and molding
production facilities assures
prompt service at low cost.

**BONDED
to Steel**

Rubber-to-steel molding in a variety of
shapes available to your specifications.

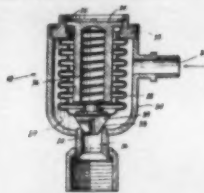
Send Print for prompt quotation.

GI

GEAUGA INDUSTRIES
MIDDLEFIELD, OHIO

Week of October 16

2,766,593. AUTOMATIC REFRIGERATION SYSTEM. Orville Mitchell, Dallas, Tex., and Robert V. Anderson, Oklahoma City, Okla., assignors to The John E. Mitchell Co., Dallas, Tex., a corporation of Missouri.



1. In a refrigeration system, a compressor, a condenser, an expansion device, and an evaporator, the compressor having a capacity to supply the refrigeration load on the evaporator at low compressor speeds, means for operating the compressor at various speeds, including speeds above that required to satisfy the load, means to prevent the compressor from reducing the temperature of the evaporator below a predetermined minimum despite speeds in excess of those required to produce the minimum, and for reducing the load on the compressor to below that corresponding to its speed, said means comprising a fluid-flow responsive valve device between the evaporator and the compressor, the valve device having means to throttle flow through the compressor in response to excess capacity of the compressor, and comprising an inlet on the evaporator side, a partition having a valve port and a valve seat, and an outlet on the compressor side; a valve cooperable with the valve seat, the valve being adapted to position itself as a function of the rate of fluid flow past it

through the valve port, and to that end the valve port and the outlet being large enough relative to the size of the inlet and the valve and valve seat having relative shapes such that the valve produces a pressure drop between the inlet and outlet that varies with the degree of throttling of the valve port by the valve; a collapsible-walled chamber connected to the valve and having its collapsible wall exposed to inlet pressure; and yieldable force means acting on the valve to apply predetermined closing pressure thereon, the size of the valve seat being large relative to the size of the collapsible wall but smaller than

the said wall, so that the valve is positioned primarily as a function of pressure drop across the valve, but can be opened from a closed position by pressure on the collapsible wall.

2,766,594. BUILT-IN KITCHEN REFRIGERATOR. Ida Dilger geb. Deisinger, Frankfurt am Main, Germany. Application Aug. 19, 1953, Serial No. 375,172. Claims priority, application Germany Aug. 23, 1952.

1. In a kitchen with built-in furniture, including at least two rectangularly arranged rows of adjacent pieces

(Continued on next page)

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications \$10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

REFRIGERATION SERVICE engineer desires location in southern state after May 1, 1957. 9 years' experience electrical maintenance. 10 years' experience domestic, commercial, light air conditioners. Factory approved service of Servel absorption air conditioners. Age 39. RAY ALLAIN, St. Anne, Illinois.

AIR CONDITIONING, refrigeration installation and design engineer. Eleven years' experience, design, estimating, layout, field installation supervision, trouble shooting. Self contained, centrifugal, central systems, heating. Complete calculations, plans, layouts. Seek desirable position with contractor or engineering firm, Los Angeles, California area. Resume, references upon request. Age 36, married. BOX A5742, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

BLAST FREEZE Corporation needs men capable of assisting independent food stores in merchandising on premise frozen red meats under an exclusive Blast Freeze franchise. Give complete information by letter to ROBERT B. AYRES, President, 10 Main Street, Park Ridge, Illinois.

MANUFACTURERS' REPRESENTATIVES: Territories available for experienced commercial refrigeration salesman to represent manufacturer of complete line of all temperature ranges in packaged machines. Write, giving personal details and background to: J. R. BEAN, Sales Manager, 2524 Brooklyn Road, Jackson, Mich.

SERVICE MANAGER—Large New Jersey commercial distributor is looking for man with experience in engineering supermarkets. Personal qualifications to manage servicemen and experience in air conditioning desirable. Send qualifications to R. L. EGGERT COMPANY, 39 Main Street, East Orange, New Jersey.

OLD ESTABLISHED air conditioning & heating service company offers job with unlimited opportunity to experienced man with initiative, used to working on his own, to take charge of cooling department, installations, service, hermetic shop, many national accounts. Call MR. MANES, SU-1-9400, Cleveland, Ohio.

MANUFACTURER'S REPRESENTATIVE now calling on refrigeration men, to sell complete line of top quality commercial refrigeration for grocery, bakery, restaurant, institutions. Protected territory in Michigan, Indiana, New England. THE C. SCHMIDT COMPANY, 1712 John Street, Cincinnati 14, Ohio.

SERVICE AND installation men. For Scotsman ice machines and carbonic drink dispenser. State past experience covering last 5 years. Enclose snapshot of yourself. Advise how soon available and salary expected. WATERS EQUIPMENT COMPANY, INC., 4602 N. Dale Mabry, Tampa, Florida.

MANUFACTURERS' REPRESENTATIVES wanted for water type heat pump suitable for residential, commercial and industrial installations. Many localities still available. Send complete resume of education and sales engineering experience to P. O. BOX 5897, Jacksonville, Florida.

WANTED: MANUFACTURERS' agents and representatives for leading line of diffusers and grills. Many territories open. Write BOX A5725, Air Conditioning & Refrigeration News.

DISTRICT SALES Manager—We need an aggressive, alert sales engineer who is thoroughly acquainted with commercial and industrial air conditioning and refrigeration equipment. The man selected would have as customers some of the industries largest companies and will be traveling throughout the Midwest. The position offers an excellent opportunity from a monetary stand-point plus the association with an organization that builds a quality line. Write giving full details of your background and experience to BOX A5741, Air Conditioning & Refrigeration News. All replies treated in confidence.

MAJOR SMALL air conditioning manufacturer has openings available for (1) sales training director (2) packaged product application engineers. Field sales experience in packaged air conditioning desired. Outstanding chance for good immediate positions with unusual growth potential. Residence in the East. Send resume of background and experience to BOX A5744, Air Conditioning & Refrigeration News.

WANTED—AIR conditioning sales engineer experienced by Frigidaire distributor in New York metropolitan area. Excellent opportunity. Salary plus commission. Write BOX A5746, Air Conditioning & Refrigeration News.

REGIONAL SPECIALIST to sell central station air conditioning equipment through distributors in Southeast 10-state area. Require at least 5 years' experience and engineering degree or equivalent. Age limit 40. BOX A5747, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WE ARE interested in receiving offers of refrigeration equipment and supplies at attractive prices. Wholesalers covering Northern Mexico and Pacific Coast. FRI-CAL-VEN, S. A., P. O. Box 1600, Monterrey, N. L.—Mexico.

WANTED: USED Scotsman ice machines. Give model, serial number and asked price in reply. WATERS EQUIPMENT COMPANY, INC., 4602 N. Dale Mabry, Tampa, Florida.

EQUIPMENT FOR SALE

ARCTICAIRE AIR conditioning equipment 2, 3 and 5 ton packaged water chillers, air or water cooled. Direct expansion air conditioning systems 2, 3 and 5 ton, air or water cooled, self contained and remote types. Write for literature and prices. ARCCO, MANUFACTURERS AGENTS, INC., Merchandise Mart Bldg., 2201 Grand Avenue, Kansas City, Missouri.

WE HAVE Coolerator refrigerator, freezer and electric range parts that we are willing to dispose of at a fraction of original cost. Included are a number of Tecumseh units. Please write us for inventory and sacrifice prices. ALBERT MATHIAS & COMPANY, INC. P. O. Box 391, El Paso, Texas.

NEW SILICA-GEL driers complete with flare nuts. 14 cu. in.—¼" flare—\$1.91, 20 cu. in. ¼" flare—\$2.00, 20 cu. in.—½" flare—\$2.12, 32 cu. in.—½" flare—\$2.94. Minimum order 10 driers. Orders of \$100.00 or more we pay freight. TECHNICAL RESEARCH CORP., 6735 Cahuenga Boulevard, North Hollywood, California.

AIR CONDITIONING components consisting of new, inactive, and used air conditioning compressors, controls, water chillers, and other component parts for 2, 3, and 5 ton units suitable for residential air conditioning. BOX A5743, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

AIR CONDITIONING room coolers. Warehouse operation. Sales office in Chicago Loop established twelve years serving Loop area. Death of owner necessitates selling. Excellent opportunity for aggressive man. BOX A5745, Air Conditioning & Refrigeration News.

MISCELLANEOUS

ATTENTION SERVICEMEN: Send for free circulars and bulletins on refrigeration parts and equipment. Real money saving values: WALTER W. STARR, 2833 Lincoln Avenue, Chicago 13, Illinois.

Reserve Your Extra Copies Now
of the March 18
Air Conditioning "Show Case" Issue

Includes specifications on every major 1957 Air Conditioner . . . more than 38,000 facts on over 1,200 Room, Residential, and Commercial packaged units.

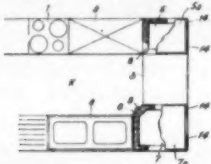
These specifications are essential material wherever Air Conditioning units are manufactured, sold, or serviced. Every top man in your company needs them. Reserve your copies TODAY!

1 - 9 copies (\$1 each) 10 - 49 copies (\$.75) 50 or more (\$.50)

AIR CONDITIONING & REFRIGERATION NEWS
450 W. Fort St. • Detroit 26, Mich.

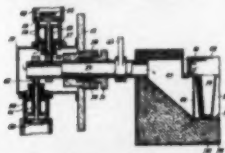
PATENTS

(Continued from preceding page)
of furniture of equal height and depth forming a continuous level-top surface and enclosing with the two adjacent kitchen walls a free corner space, a



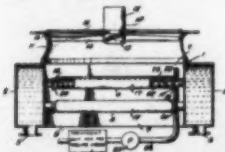
refrigerating box of a height corresponding to said other pieces of furniture, fitted into said corner space and having a lid opening toward the top, said box having an oblique rear face cutting across the kitchen corner to form a shaft bounded by the kitchen wall and the rear face for venting the cooling machinery, and having also an oblique front face supporting a plurality of control devices, the oblique faces serving also to diminish the distance from the front face to the rear-most point inside said box.

2,766,596. MOULDS OR CONTAINERS FOR THE MAKING OF ICE BLOCKS, FROZEN CONFECTIONS AND THE LIKE. Matthew Mattingly Baker, West Heidelberg, near Melbourne, Victoria, Australia. Application Nov. 13, 1953, Serial No. 391,915. Claims priority, application Australia Nov. 17, 1952. 8 Claims. (Cl. 62-114.)



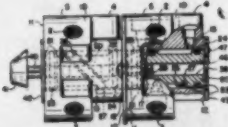
1. Apparatus for the making of ice blocks and like frozen confections including a support, a trough-shaped housing rotatably mounted in the support, a mould plate fastened to the open side of the housing so as to provide a chamber between the plate and the walls of the housing, said mould plate carrying a series of moulds, transverse baffles mounted within the housing and extending across such chamber, a coolant supply, a warming agent supply, and means for feeding the coolant and the warming agent interchangeably to such chamber.

2,766,597. HEAT EXCHANGE DEVICE FOR THE EVAPORATIVE COOLING OF A LIQUID. Joseph F. Gleck, Mission, Kan., assignor to J. F. Pritchard Co., Kansas City, Mo., a corporation of Missouri. Application March 22, 1954, Serial No. 417,875. 5 Claims. (Cl. 62-154.)



1. A heat exchange device including a tube for passing a fluid to be cooled, a porous jacket covering the tube and spaced therefrom to provide a passageway about said tube, said porous jacket having ends closed about the tube for confining a cooling liquid around said tube, duct means connected with the passageway for supply the cooling liquid to said passageway, means connected with said duct means for establishing a pressure on the confined cooling liquid to exude the cooling liquid through the porous jacket and form a wetted surface on said jacket, and means for passing a current of air around said wetted surface of the porous jacket to effect reduction in temperature of the cooling liquid and cooling of the fluid passing through said tube.

2,766,771. CONTROL VALVE. Hans H. Wenzel, Chicago, Ill., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application March 3, 1952, Serial No. 274,636. 2 Claims. (Cl. 137-595.)



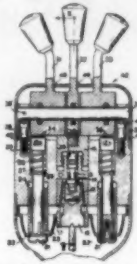
1. A valve comprising a body portion, a cylindrical bore of uniform diameter throughout extending through said body portion, a plurality of spaced ports in said body opening into said bore, a rotatable plug member in said bore substantially coextensive in length with said bore and having an appreciable reduced diametrical dimension from that of said bore, said plug comprising a pair of similar hollow plug halves assembled axially on an inner hollow arbor member, each of said plug halves having a pair of spaced radially extending circumferential ribs near one extremity and a diagonally extending circumferential rib near the other extremity, said diagonally extending ribs of said plug halves being parallel when the halves are assembled,

sealing means positioned between the circumferential ribs at each end of said plug and extending beyond said ribs, flexible sealing means held in place between said diagonally extending ribs by its own tension and projecting radially beyond said ribs, said sealing means on said plug member contacting said body portion when said plug member is positioned in said bore and supporting and guiding said plug member in said bore, cover means secured to said body portion covering each extremity of said bore to prevent substantially axial movement of said plug member and at least one of said cover means having an aperture therein adapted to align with the opening in said arbor member, and dowel means inserted into said hollow arbor member and through said aperture in said cover means to rotate said plug member.

2,766,772. VALVE APPARATUS. Frank Welty and Raymond D. Welty, Youngstown, Ohio, assignors to Carbonic Dispenser, Inc., Canfield, Ohio, a corporation of Ohio. Application April 17, 1952, Serial No. 232,752. 10 Claims. (Cl. 137-630.2.)

1. In a valve assembly for mixing and dispensing a plurality of flavored beverages the combination of a body member; first longitudinally movable valve means positioned centrally in said body member and adapted to control the flow through said valve of a base liquid; second, third and fourth longitudinally movable valves positioned in said body member each

adapted to control the flow of a flavoring liquid; said first, second and third valves being positioned substantially in a single plane; a pivot rod carried



by said body member in said plane and spaced longitudinally with respect to said first, second and third valves; and first, second and third operating levers pivotally carried by said rod and adapted to operate said first, second and third valves respectively; said levers having first, second and third cam surfaces respectively thereon overlying said first valve means and adapted upon pivotal movement of said levers to cause longitudinal movement of said first valve means; said second and third cam surfaces overlying said second and third valves respectively and adapted upon pivotal movement of said second and third levers to cause longitudinal movement of said second and third valves; said first valve means including a first valve and means underlying said first cam surface and overlying said first

valve and said fourth valve whereby upon pivotal movement of said first lever said first and fourth valves will be caused to move in a longitudinal direction.

6. In a valve for dispensing liquids the combination of a body member having a longitudinal end surface; a valve carried by said body member and adapted for longitudinal opening and closing movement therein; yieldable means carried by said body member to urge said valve longitudinally into a closed position, said valve having a stem portion extending longitudinally of said end surface, said stem portion having a generally flat bearing surface at the end extremity thereof; an operating lever pivotally carried by said body member and having a cam surface thereon adapted to engage said flat bearing surface; said lever being pivotally movable between first and second limit positions; said valve and said lever being so oriented that the point of pivotal support of said lever is substantially aligned with the axis of longitudinal movement of said valve; said cam surface comprising first, second, third and fourth cam surface portions; said first cam surface portion being adapted to overlie said bearing surface when said lever is in said first limit position and said first surface portion being disposed generally normal to said axis of longitudinal movement and extending substantially on both sides thereof; said first surface portion being so positioned with respect to said point of pivotal movement as to cause said

valve to be in a fully closed position when said lever is in said first limit position; said second cam surface portion being of arcuate convex contour extending substantially from tangency with said first surface portion and having a radius of in the order of three times the length of a first radius extending from said point of pivotal support to said first surface portion, said second surface portion extending into intersection with a second radius extending from said point of pivotal support at an angle of in the order of thirty-five degrees from said first radius; said third cam surface portion comprising a substantially flat portion extending from the intersection of said second surface portion with said second radius into intersection with a third radius extending from said point of pivotal support at an angle of in the order of ten degrees from said second radius; said fourth cam surface portion comprising a substantially flat portion extending from said last mentioned point of intersection in a direction substantially normal with respect to said third radius; said fourth cam surface portion adapted to overlie said bearing surface when said lever is in said second limit position; and said third and fourth cam surface portions being so positioned radially with respect to said point of pivotal support that said valve is substantially fully open when either said third or fourth cam surface portion overlies said bearing surface.

(To Be Continued)

... SO HALSTEAD & MITCHELL ENGINEERS DESIGNED

AIR-COOLED CONDENSERS FOR SIMPLER MULTIPLE CIRCUITING

Selecting circuits and manifolding when connecting several air conditioning and refrigeration units to a single remote air-cooled condenser can be expensive unless the air-cooled condenser is designed for the simplicity that means low labor costs.

That's why it's real news that Halstead & Mitchell engineers have devised a remote air-cooled condenser especially for extra-easy multi-circuiting. As costs come down, your sales go up.

The Halstead & Mitchell Air-Cooled Condenser has been designed with several *no-cost* extras like this easier multiple circuiting. Only Halstead & Mitchell offers, for instance, "Turbu-Flo"® finned surface

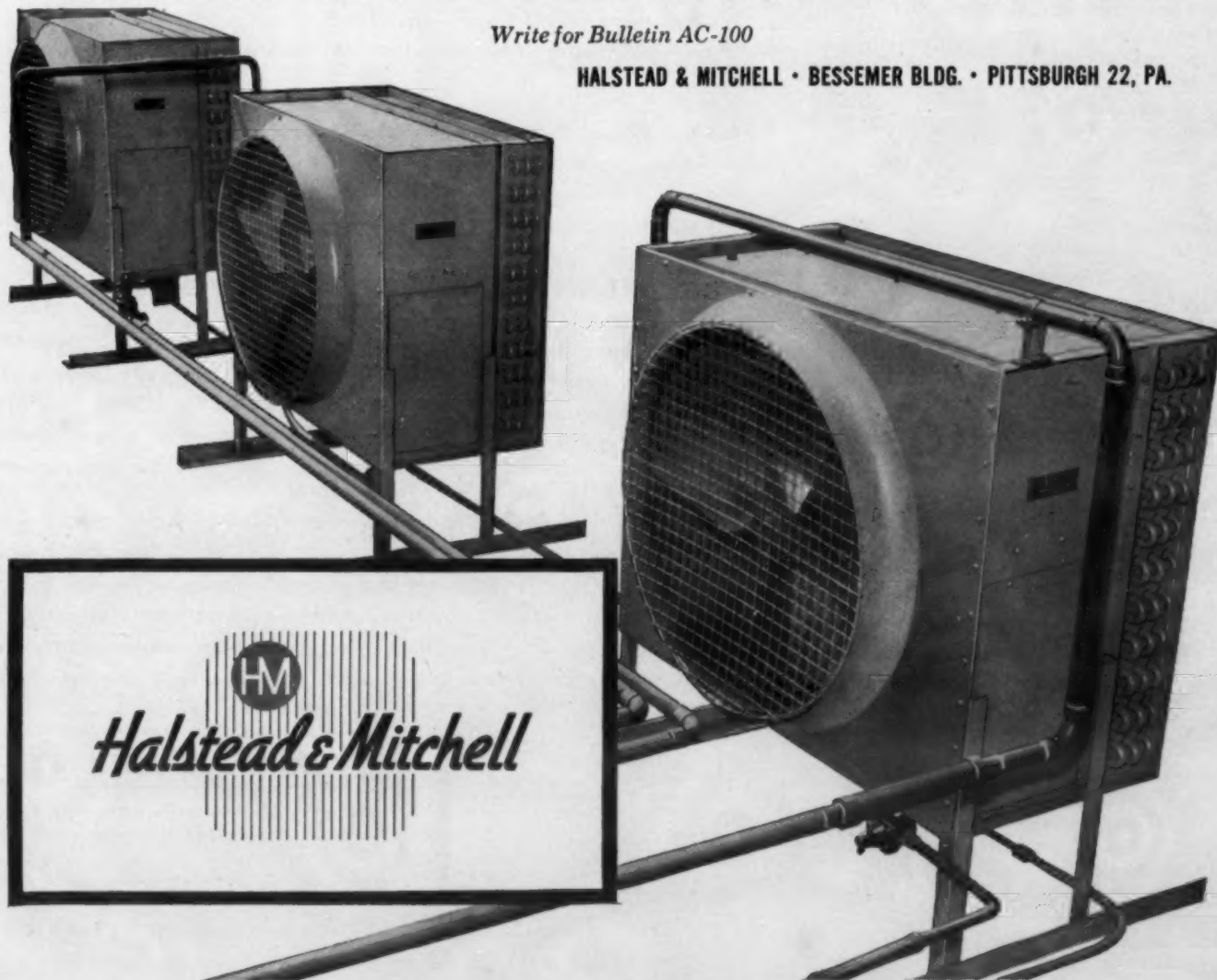
which provides added heat transfer to give you *extra-safe* capacity ratings. No need to worry when you recommend H & M.

There are extra years of working life, too, for Halstead & Mitchell's superiority in cooling tower steel protection has been used to keep air-cooled condensers free from rusting. The tubing assembly is self-reinforcing, locking out vibration before it starts.

Lifetime ball bearings and deep-pitch, slow-speed fans make for quiet operation. It's the assured operation you look for when you select Halstead & Mitchell, manufacturer of the industry's broadest line of water-saving devices for air conditioning and refrigeration.

Write for Bulletin AC-100

HALSTEAD & MITCHELL • BESSEMER BLDG. • PITTSBURGH 22, PA.



HM
Halstead & Mitchell

For more information about products advertised on this page use Information Center, page 22.

Maybe In 1958

George Jones Says He'll Recommend ARI Exposition on Pacific Coast

LOS ANGELES—Recommendation for an Air-Conditioning & Refrigeration Institute show on the Pacific coast, probably in 1958, will be made by George S. Jones, Jr., managing director of ARI, when he returns to his Washington, D. C. headquarters. Jones conferred with all segments of the industry during a four-day stay here.

His trip here followed a recent meeting of ARI's show committee which asked Jones to come here and determine the value of such a show in terms of the needs expressed by the industry.

Pursuant to the committee's action, Jones will recommend to the board of directors of ARI they give immediate attention to a show on the coast and make a careful study of all phases at an early date.

Jones said he is convinced the value of such a show will continue because of:

Trade market development.

Increasing industrial growth of individual manufacturers and the great number of people in the trade, including contractors, engineers, and dealers.

His feeling that ARI can develop a show which everyone in the industry can support.

Regarding the Western Air Conditioning, Heating, Ventilating and Refrigeration exhibit

and conference scheduled for May 4-8 at Los Angeles this year under the sponsorship of Western Air Conditioning Industries Association, Jones said while he was not too familiar with the details and had not seen a list of exhibitors, he saw no reason for this show, which is a regional show, conflicting with the plans of ARI to hold a show at some future date which would receive the complete support of the air conditioning industry.

Jones again expressed his regret that a show was being planned during a year in which the show sponsored by ASHAE in February, and a show sponsored and managed by ARI in September, were being held.

Beckman, Statham Agree To Merge As Integrated Firm for Instrumentation

FULLERTON, Calif.—Dr. Arnold O. Beckman, president of Beckman Instruments, Inc. here, and Louis D. Statham, president of Statham Laboratories, Inc., Los Angeles, jointly announced that agreement has been reached to merge the two firms, subject to the completion of legal details and the approval of shareholders.

The transaction will involve a stock exchange of up to 400,000 shares of Beckman for all of the Statham interests.

Beckman currently has 1,287,227 shares outstanding.

Statham, with production facilities in Los Angeles and Puerto Rico, manufactures precision pressure transducers, accelerometers, and other devices

used in aircraft and guided missiles and for scientific and industrial measurement and control.

Beckman Instruments maintains plants in many areas of California and in Connecticut, New Jersey, West Virginia,

Canada, and Germany. The firm employs nearly 4,000 persons in the manufacture of precision components, measuring and control instruments, computers, and data handling systems, it was pointed out.

Dr. Beckman said that pooling the interests of the two organizations "is another step toward realization of long-range plans to build an integrated company for instrumentation and automation."

Five-Alarm Fire Destroys Coon-DeVisser Building; Damage Estimated at \$500,000

DETROIT—A five-alarm fire virtually destroyed the building housing the Coon-DeVisser Co. here on Feb. 13, causing an estimated \$500,000 damage.

Coon-DeVisser distributes cooling towers, heating and ventilating equipment, plumbing supplies, and other products.

Some 125 firemen and 22

pieces of fire fighting apparatus battled the blaze for nearly an hour. Two firemen and one other person were injured slightly.

The fire reportedly started in a storage balcony, feeding rapidly on cardboard boxes containing paper-wrapped insulation material.

York-Shipley Will Offer Heat Pump Line

YORK, Pa.—A new line of heat pumps to provide year-round heating and cooling of residences and commercial establishments will soon be placed on the market by York-Shipley, Inc. here.

S. H. Shipley, president, revealed that his company has completed the research and development. The design has been proved through many actual installations, and York-Shipley will promote an aggressive sales program to sell these new units, the announcement said.

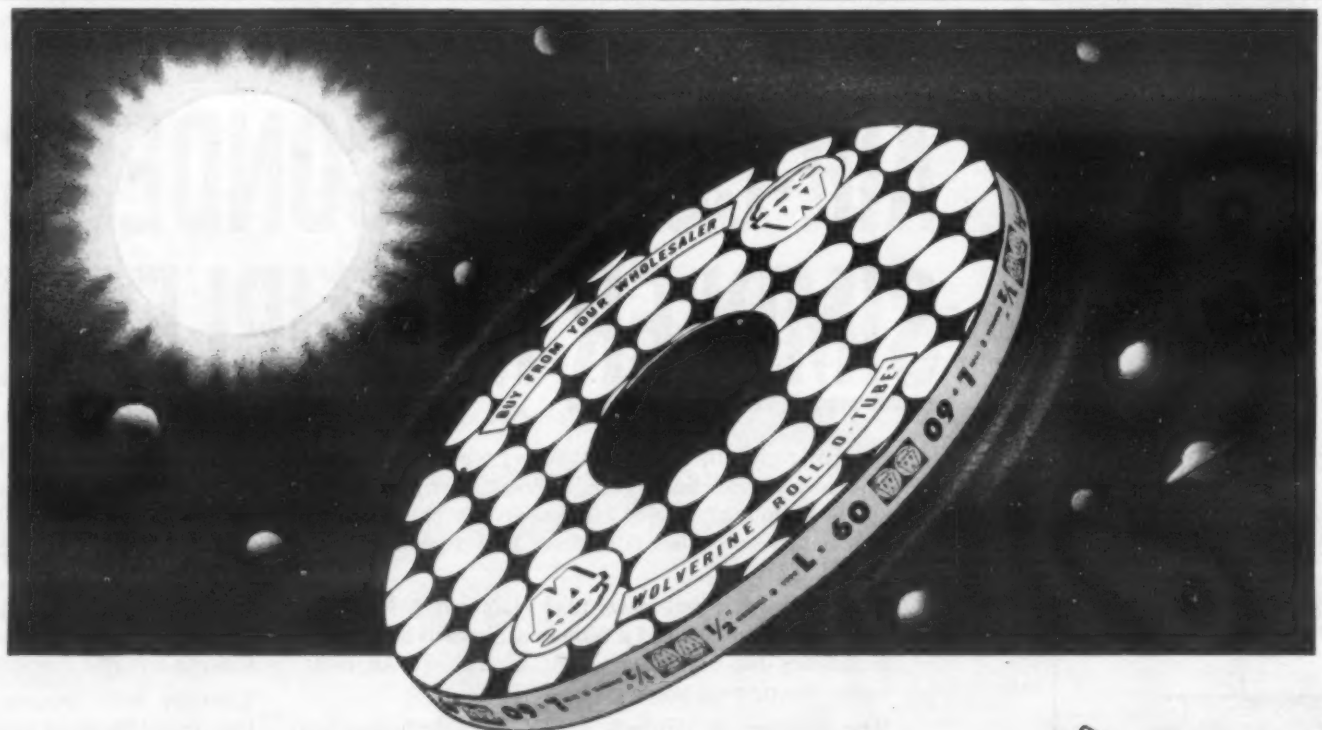
The heat pumps will be incorporated with Shipley's line of air-cooled condensing units for remote installations and will be connected to the evaporator section through new-type pre-charged refrigerant lines.

Rising Named--

(Concluded from Page 1, Col. 5) though Rising's title is the same, he will fill a new position with different functions.

Under the present plan, Rising and three other vice presidents will operate as a team in an effort to strengthen York's position in the competitive field, Haase said. The others are J. K. Loudon, vice president, manager Commercial Div.; R. K. Serfass, vice president, manager Industrial Div.; and R. F. Lauer, vice president engineering and research.

Formerly director of consumer relations for Whirlpool-Seeger, Rising has held air conditioner posts with that firm and RCA and has served as vice president and general manager of O. A. Sutton.



YOU BET THERE'S SOMETHING NEW UNDER THE SUN

... It's Wolverine Roll-O-Tube®—the most functional carton yet devised for copper water tube and copper refrigeration tube. Just look at these Roll-O-Tube advantages:

FOR YOU—Super-thin Wolverine Roll-O-Tube helps you conserve valuable floor space by stacking more tube in a given area. Because it is easy to roll and carry, Roll-O-Tube is easier to handle—helps you provide better customer service. Roll-O-Tube's large, easy-to-read print simplifies inventory—tells size and type of tube at a glance. Every Roll-O-Tube carton you sell helps strengthen your position as a wholesaler because it always urges your customers: **BUY FROM YOUR WHOLESALER.**

FOR YOUR CUSTOMERS—Outstanding among Wolverine Roll-O-Tube's many work-saving features, is the carton's use as a reel. All the user does is fasten the tube at one end and roll the carton back. It's fast, easy—gives a straight, kink-free line every time. Also important is the way Roll-O-Tube can be rolled—

like a hoop—and its convenient center hole that makes carrying easy. Plumbers and refrigeration service engineers also have warm praise for the way Roll-O-Tube protects unused tube—keeps it free from damage and dirt until needed again.

And of course there's the quality of the tube. Roll-O-Tube contains Wolverine copper tube—rigidly quality controlled, clean, bright, consistent in temper and always easy to bend, both in the shop and on the job.

And there you have it—proof positive that there is something new under the sun. Better make sure—now—that you have a plentiful supply of Wolverine Roll-O-Tube on hand. To help make inventory easier write for your copy of the Wolverine Want Book.



CALUMET & HECLA, INC.
CALUMET DIVISION
WOLVERINE TUBE DIVISION
FOREST INDUSTRIES DIVISION
GOODMAN LUMBER COMPANY
CALUMET & HECLA
OF CANADA LIMITED
CANADA VULCANIZER AND
EQUIPMENT COMPANY LIMITED



WOLVERINE TUBE

Division of Calumet & Hecla, Inc.
1413 CENTRAL AVE., DETROIT 9, MICH.

Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

PLANTS IN DETROIT, MICHIGAN, AND DECATUR, ALABAMA. SALES OFFICES IN PRINCIPAL CITIES

EXPORT DEPT., 13 E. 40TH ST., NEW YORK 16, N.Y.